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THE AMERICAN BEE JOURNAL

DEVOTED EXCLUSIVELY TO BEE CULTURE

Established in 1861, at Washington, by the late Samuel Wagner.

> "Behold! yon bord'ring fence of Sallow trees
> Is fraught with flowers, the flowers are fraught with Bees;
> The busy Bees, with soft and murmuring strain,
> Invite to gentle sleep, the laboring swain."
>
> —VIRGIL.

> "My son, eat thou honey, because it is good; and the honey-comb which is sweet to thy taste: so shall the knowledge of wisdom be unto thy soul."
>
> —PROV. xxiv: 13.

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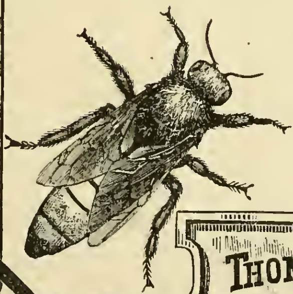

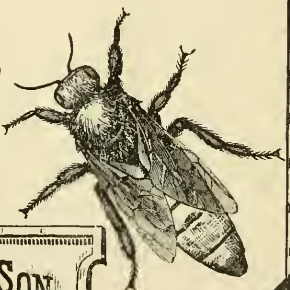

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The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, JANUARY, 1877. No. 1.

The Wisdom of the Past.

Resuming our notice of the old bee book to which a brief article was devoted in the November number, we propose to specify a few things in regard to which the intelligent bee-keeper was apparently as well posted in 1814, as he is in this Centennial year 1876. Taking the order of topics as pursued by our author, we come first to

STINGING.

Mr. Keyes insists as we do now, that bees are not little winged devils going about seeking whom they may sting; that their habit is to mind their own business; that they seldom sting unless provoked or injured; that they have a special dislike of some people; that their venom is more potent at some times than at others; that patience, quiet movements, retreat, thrusting the head among bushes, and the like, are the best precautions. If they are excited, he advises, "let water be thrown among them, or blow them forth with a bellows." We thought the use of smoke as a means of quieting bees a modern invention, but here it is in print more than sixty years ago:—"The smoke of damp straw or rags will drive them away soon."

In regard to remedies for stinging, our author says, "I have generally experienced my own saliva (spittle) to be more beneficial than pompous chemicals or galenicals." Various remedies commonly resorted to now-a-days are mentioned in this old bee-book.

WEARING A BEE-DRESS.

There is nothing particularly different from the modern styles of bee-dress in the attire described by Mr. Keyes, but painful experience constrains us to commend the wisdom of the following "rule:"—

"To put on the bee-dress whenever an operation is to be performed; for although not always necessary, yet it will be prudent to be prepared against the worst, especially for the inexperienced. For a foot may slip, or an accident happen, that no human foresight could be apprised of."

We have not found that our observation sustains the following bit of advice however:—"Great care should be taken after the dress is off, of coming near the bees, as they will be eager to sting for three or four days, though the person be at a considerable distance."

ON THE APIARY.

This is sound:—"The properest situation for an apiary is one exposed to the wind as little as possible: it being detrimental, and proving often fatal to numbers of bees by blowing them down, or into the water, or overturning the hives." This also is good:—"It is very wrong to place hives on benches, which is always the source of mistakes, quarrels, and often slaughter, by their interference with one another. A still worse contrivance, is that of little cots or sheds, with shelves therein, one above another, affording a harbor for their enemies, and very inconvenient for their management generally. The arrangement I would recommend, is that of SEPARATE STANDS FOR EACH HIVE," Mr. Keyes advises that these stands be built "sixteen inches above the earth,"—we should say "six" omitting the "teen."

The necessity of water being kept in the vicinage of an apiary was well understood; "put it," says Keyes, "in a broad dish, covered with small stones or duckweed, to assist the bees in drinking, without wetting their wings, or getting drowned."

HIVES.

Mr. Keyes describes and illustrates with old-fashioned wood-cuts both straw and board hives, the latter looking externally very much like a common Langstroth hive. His directions for making straw hives are admirable. It is remarkable that the germ of the modern movable-frame appears in this old book, only the frame was a fixture. His straw hives even, were provided with "wooden tops' made with a "board the width of the hive, half an inch thick, free from knobs." Seven spaces or openings were cut in this board, half an inch wide. If preferred, "a cheaper top may be made of narrow slips of wood, which I name BARS, six in number designed to be laid across the top of the hive, at half an inch distance from each other; the outermost bars to be one inch and a quarter wide, and the others one inch and a half." Our author says that some hive-makers complained of difficulty in making hives of the sort prescribed by him, but without grounds. The person employed by him, after a little practice, could make them as expeditiously and easily as those of the common sort. His ideas about hives were eminently simple and practical, no "fancy fixings" of any kind being employed.

LARGE STOCKS.

Our author believed in putting two and even three stocks together for the purpose of obtaining a larger proportionate yield of honey than could be got from single stocks. This method he called "storifying," i. e. making two or three stories, by placing one or two hives above a lower one. His hives were so made as to admit of this. Our friend, Hosmer of Minnesota, can hardly advance an idea on this subject which Keyes had not ventilated more than half a century ahead of him. Indeed, we half suspect Hosmer of having obtained old Keyes' book somewhere on the sly, and kept all its wisdom in his own head, dealing it out in very few words, at Conventions, as original. We are confirmed in our suspicions by finding that old Keyes considers "a quart" of bees about enough to winter in a single hive. Hosmer has been supposed to hold a kind of patent on the "quart" theory, but here it is as far back as 1814.

"SALVATION OF BEES."

Keyes argues for this. The above is his own phrase. He advocates the plan of "storifying" for this, among other reasons, that by its means, "the family is perpetuated to any length of time, without the cruel necessity and trouble of destroying indiscriminately both old and young." He pleads for the "salvation of bees" as the more profitable plan, going at great length into the argument, giving facts and figures, *a la* Jasper Hazen, and concludes a full chapter on the subject by saying:—"The old practice of suffocation, must be condemned as impolitic, and highly disadvantageous; *for they must be very weak who pursue a plan of conduct of small profit, when a better is offered of double or treble advantage.* The italics are his own.

COMB VERSUS LIQUID HONEY.

Though the extractor was unknown in those days, the honey market was injured then as now by the impure honey that found its way into it. Hence the following most respectful advice:—"With submission I would recommend to the nobility and gentry to purchase none but combs of honey, to be drained at home. Sophistications and impurities would then be avoided, and such combs might be selected as are fine, or according to their own fancy. Were this condition insisted upon, the markets would soon abound with *combs* of honey instead of pots. The introduction of such a custom must depend on the patronage of the gentry."

MISCELLANEOUS.

Mr. Keyes was alive to the advantage of feeding bees in Spring even though they still had stores. He says, "It enlivens and strengthens them, and stimulates their activity, causing them to breed the earlier." He is very sensible on the diseases of bees, giving the cause and cure of dysentery about as correctly as Novice or any other high, modern authority could do. He well says:—"The failure of stocks has in most countries been attributed to witchcraft, or other superstitious notions, instead of attributing them to their true cause,—badness of weather, or rather their owner's neglect or want of skill." The chapters on hiving, driving, artificial swarming, deprivation, and the monthly calender of operations, indicate an amount of practical knowledge and skill, we were not prepared to find in a bee-keeper of more than half a century ago.

Lovers of the new and original, will doubtless be ready to say, "enough of this old bee-book, let us have something of to-day." All right. But however fresh and wonderful some item of bee lore may be, do not raise a flourish of trumpets over it as a discovery, until you are sure old Keyes knew nothing about it. And remember that after all, success in bee-keeping, like many other things, depends on a regard to principles old as the hills. It is often the case that what is new is not true, and what is true is not new. W. F. C.

* * *

☞ Some of the wrapping paper we used last month had been spoiled in printing Centennial Advertising Cards. It contained the "faces" of all the candidates for presidential honors. A friend who happened to get one not agreeing with his political faith, wrote to ask us if we intended to bull-doze him? Certainly not! We only intended a gentle "bee-doze." Wrappers are only intended to protect the journals while passing through the mails, and should not be expected to bear intelligence other than the address of the subscriber.

* * *

☞ We have received from friend Becktell a sample of the foundation he purchased of Novice, and he wishes us to state our opinion of its purity. We have not been able to detect anything in it other than pure beeswax, though it seems to be much softer than the pure article. Some tallow may have been mixed with it, as Novice intimates, by an oversight. Whatever may be said of foundation—when made of pure beeswax—all unite in pronouncing it a general nuisance when it contains paraffine or other ingredients.

* * *

☞ Friend Muth of Cincinnati, O., is doing a good work in trying to introduce the use of honey where, heretofore, grape sugar has been used exclusively. Brewers, wine producers and liquor manufacturers use millions of pounds of grape sugar annually. To convince them that honey is better adapted to such uses, will be to find a new market for millions of pounds of honey annually. The time is coming, no doubt, when honey will be used by TONS where now *pounds* only are demanded. Brewers will be the principal consumers of the above classes, but all, and others too, will yet find it to be to their advantage to use honey in abundance.

* * *

☞ It will be noticed with pleasure by all, that this issue is enlarged and improved. Its beautifully white paper vieing with the neatness of its cover in making an attractive appearance.

The Future of the N. B. K. Society.

We were greatly relieved to find from the December number of the A. B. J., that the N. B. K. Soc. is to live on in some form, and we hope it will be with growing strength and prosperity. A note from President Andrews forshadows a scheme to make the Society a beneficiary one, like that of the Locomotive Engineers. At our suggestion and request, he embodies his views in an article in this issue, which will no doubt elicit the opinions of the bee-keeping fraternity, and we hope result in the adoption of a course that will be satisfactory to all. What is needed is a bond of sympathy and union, a method of co-operation, opportunity for discussion, and combined action for the promotion of a common interest. We shall gladly go in for any scheme that meets general approval, and hope to be in a position shortly to do more for the advancement of apiculture, than we have been able to attempt for some time past. W. F. C.

* * *

☞ Friend Murphy has sent the superbly-finished Extractor he had at the Centennial Exhibition, to this office, where it can be examined by all our callers who did not see it at Philadelphia. It is a real *beauty*. Mr. Murphy says: "I do not pretend to get up a very stylish extractor, but for ease in operating, durability, and for doing the least injury to the comb, I do not think it can be beaten; and as to the honey knives, I have not seen anything that will compare with mine for convenience in operating upon straight or uneven combs."

* * *

☞ December was a cold month. From 10 to 26 deg. below zero in the Northern States, and at zero to 10 deg. below in the Southern States. Fortunately, the bees were in winter quarters before the "cold snap" came; else it may have done much damage.

* * *

☞ It is expected that our friend, CLARKE, the former editor of this paper will take up his permanent residence in Chicago soon. As we have already made arrangements to have him "office" with us —THE AMERICAN BEE JOURNAL will receive some of his attention. As to how much, let the next issue tell. Suffice it to say that we expect to make the numbers for 1877 surpass all that have preceded them.

* * *

☞ We send THE AMERICAN BEE JOURNAL and the *Bee-Keepers' Magazine* for 1877 for $2.75—a little over the price of one.

Our Exchanges.

BRITISH BEE JOURNAL.

Friend Abbott has removed to Southall, and there proposes to start a School of Apiculture, which he thus describes:

"It comprises nearly four acres of paddock, orchard, lawn, garden, and premises; and being almost surrounded by open pasture-land, orchards, and gardens, we hope it will serve as a means to illustrate every phase of bee-keeping. It is proposed to build a light, movable tent, with gauze front, in which nervous visitors may view any and every kind of manipulation in perfect safety, yet be so close to the operators that every word of explanation shall be audible to those whose hearing is not defective."

BEE-KEEPERS' MAGAZINE.

After remarking upon the very slim honey show at the Centennial, friend King says:

"Capt. Hetherington, an uncommonly busy man, visited the Exhibition in September and was so struck with the lack of enterprise exhibited in this department, that he went straight home and at considerable expense shipped and put up in fine style in the centre of the large Agricultural Hall, about 3000 pounds of his nicest white clover box honey, and for this act of pure patriotism, he deserves and will receive, not only the premium from the Centennial Commission, but the lasting gratitude of every American bee-keeper. We understand he is now preparing his 1600 colonies for winter."

GLEANINGS IN BEE-CULTURE.

HOW TO PREPARE WITH CHAFF.

Novice remarks that "in using chaff for out-door wintering, it is well to have a vacant space above the chaff under the roof; and the roof or cover must not be too close-fitting, or you will have frost and dampness collecting on its under side, that may run down and wet the chaff packing. If you will take a look at the under side of the cover after a freeze, you will get the idea. To carry off this dampness, the air must be allowed to circulate to some extent above the chaff; raising the cover a little, or having holes covered with wire-cloth just under the eaves, will answer. Be sure you keep the chaff dry, and that none of your covers are leaky."

COMB FOUNDATION.

"MR. DOOLITTLE brought us a cake of yellow wax to be made into foundation,—5 cells to the inch for brood combs—that for beauty and purity, goes considerably ahead of any furnished us heretofore. When questioned he said it was purified with vinegar, as given in Quinby's book. On turning to the page we find:

"By adding an acid to the water in which the wax is melted, it may be separated much more readily. A quart of vinegar to a gallon of water, or a small spoonful of nitric acid is sufficient."

Such wax makes beautiful yellow foundation, and it will without doubt pay to treat it all thus for comb honey; but for the brood chamber, we believe the dark wax to be equally good."

Our Letter Box.

Columbiana Co., O., Dec. 24, 1876,—"This has been the best honey season for years, and the honey was of extra quality. Bees gathered it almost the whole summer, and till frost came." JOS. HUESTIS.

Ingham Co., Mich., Nov. 24, 1876. "Last season was a poor one, though I wintered 51 colonies without loss, and received 75 new swarms, and 3000 lbs. comb honey, and about 500 of extracted." JOHN L. DAVIS.

Montgomery Co., Ind., Dec. 23, 1876.—"The honey season was good till July. Since then bees gathered no surplus. The bee business is on the increase here. I am building up a home market for my extracted honey at 20c. I was troubled considerably with fertile workers."

ISAAC SHARP.

Crawford Co., Pa., Nov. 22, 1876.—"I am trying to make bee-keeping pay, but I never could do anything great with a large number of colonies; but with a small number, I have realized $35 per hive. That is doing very well, but why cannot that be done with from 100 to 200 colonies? I have the Italian bees, extractor, frame hive, and foundation-comb, and can manipulate bees in any way I please,—practice artificial swarming in part. I also have a number of works on bee-culture, and read all the journals."

J. M. STEPHENSON.

Chickasaw Co., Iowa, Nov. 20, 1876.—"In the fall of 1872, I had 59 stocks of bees; lost all but 9 during the following winter; increased, during 1873, to 31 stocks, and lost all but 7 during the winter. In 1874, increased to 11, and lost all but 5 wintering. In 1875, increased to 11 again, and succeeded in saving them all, in perfect condition, through last winter. I have now 31 stocks in fine condition for winter, and have taken during the past season about 100 lbs. of honey, mostly extracted. Was troubled by late swarming, having two first swarms come off on September 2, nearly a month later than usual. It will be seen by the above brief account of my bee keeping experience that I have made an almost total failure of wintering for several winters, until last winter, and of course I am very much interested in learning how others manage, who have been successful; and I judge that a large number of the subscribers of the JOURNAL are interested as much as I am. I would suggest that your subscribers be asked to send you brief reports from time to time to enable you to tabulate and publish such tables as the one sent you by the North Eastern B. K. Society last spring, and published on page 74 of your March number. Such persons who may report extra good success can be requested to give their management more in detail."

O. O. POPPLETON.

[We should be glad to have such "reports;" believing that it would be a very interesting table.—ED.]

Henry Co., Ind., Dec. 6, 1876.—"I am a minister of the Methodist Episcopal Church in active service as a Presiding Elder, and keep bees as a recreation, and for the help they afford in making up the deficiencies in my salary. I have been, I think, quite successful and have found the employment profitable. My bees have paid me not less than $200 over all expenses this year, not counting the value of 14 hives increase. I obtained 1,500 ℔s. of choice honey. I have now 51 colonies of Italian bees, nearly all pure, and in good condition for winter. I always had a liking for the handling and managing of bees, and to my enthusiasm in the matter I attribute my success."

M. Mahin.

Waterbury, Conn., Dec. 11, 1876.—"I feel exceedingly indebted to the bee journals for almost all of the knowledge I possess on bees, although I think there is much chaff amongst the grain, and I do not know where the most of it can be found unless it be on the subject of Wintering; because so far as my experience goes both wintering and springing are very simple—long-winded orations to the contrary notwithstanding. My practice has been to shelter from the north and west, give upward ventilation, have 1¼ inch hole above the packing on top of the hive and in both ends of top. This will winter a pint of bees if the hive is contracted and the entrance made in the vacant end of the hive and under the division board. I thank our old friend Gallup for the hint on entrances. But if I should not be as successful this winter as I have for the last 16, I may have to follow suit and fill my garden full of well curbs, as some seem desirous of doing. Seven of my hives have glass on all sides, 2 panes 9½x14, and two, 9x9, and when these are packed between the glass and shutter with an old newspaper, I believe will winter quite as well as the rest. I do not think so much of large colonies as most bee-keepers seem to, as my small colonies seem to do quite as well in spring as the large ones. To be sure they need earlier attention, earlier feeding, but then a small stock does not eat much, and you have the fun of feeding and fussing over them after the long respite of winter and when there is little else you can do. I think it the very quintessence of enjoyment tinkering up a little swarm, and with a good queen it is astonishing how fast they will breed up to strong stocks. I use the Gallup frame, 12 and 14 frames in a hive. Being out of health all last summer, I could do but little for my bees and they in consequence did but little for me. I am now in readiness for next year's work."

Wm. H. Kirk.

Noble Co., Ind., Dec. 16, 1876.—"September was wet and cold, and as my bees could not gather honey, they destroyed their brood. As I was sick in bed I could not feed them; so now I have none but old bees, and they are dropping off fast. I have some packed in sawdust, some in buckwheat chaff, some in large bins (one holding 26 hives, entrance free to all, so that they can fly out at pleasure), some in store boxes, and some in a "dug out," leaving the front open. I had 27 stands in the spring; increased to 75, but obtained only 300 lbs. of extracted and box honey. I have kept bees ever since 1845."

F. R. Davis.

Clifton, Tenn., Dec. 4, 1876.—"As there was no surplus honey the past season here, bees are in a very poor condition for wintering."

C. Weeks.

Putnam Co., Ill., Dec. 1, 1876.—"My bees made honey very fast until July 20; having then made 400 four-pound boxes of honey. There was then nearly 1,000 boxes partly filled, which they have since emptied."

Otto Halbleib.

Stephenson Co., Ill., Dec. 14, 1876.—"I had 11 stands of bees in the spring. I increased to 29. Got 1,171½ ℔s. of box honey. My best swarm gave 126 ℔s. surplus."

Robert Jones.

Fredonia, N. Y., Nov. 8, 1876.—"In May last I had 49 stocks of bees, which increased to 106, giving 1800 ℔s. of box honey. The fore part of the season, from June 1st to the middle of July was very fine, but about that time the drouth came on, shortening the honey season about two weeks. The most of our honey is produced from white clover, and baswood. Will Mr. ——, the great Minnesota apiarian give his method of wintering, &c., through The American Bee Journal?"

P. Miller.

Allegan Co., Mich., Dec. 18, 1876.—"Two years ago I bought a black swarm in a box hive, and in the spring, after they had swarmed, transferred them to what we call the Johnson hive, which is a modification of the Langstroth. Both swarms wintered well, and this last summer I made 10 swarms of them, and all have their hives (9 frames) well filled. I have 132 ℔s. of box honey. This I think is good enough for a beginner."

Henry Bird, Jr.

Bureau Co., Ill., Oct. 23, 1876.—"This summer, while crossing the pasture to the harvest field, I was about to pull up a bunch of weeds, but my attention was called to the number of bees at work on them, so I let it stand. Afterwards I thought them honey-producing plants, and would gather the seed and sow it. I found them to be catnip. So I followed the hedge fence where I thought most likely to find it; cut it off with my knife (got pretty well scratched), dried and rubbed it out. It is a small seed, an ounce will sow quite a patch."

E. Pickup.

Fulton, Ill., Dec. 18, 1876.—"I commenced the season with 50 swarms, 15 of them very light; have increased by natural swarming and division to 80; have sold $415 worth of honey and beeswax (only made wax from the uncappings from extracting), and have on hand and given away and used in family about $50 worth. The honey was all gathered from white clover, in about 3 weeks, except about 400 lbs. of late honey. The fall of '76 was the nearest a failure of any since 1862 here. The extracted honey I sold at 12½c. per lb., and comb from 16 to 20c. per lb.; all in my home market. I use the Langstroth hive and Italian bees, and for convenience in handling, for extracted or comb honey I have not seen a hive its equal in my estimation; and as to bees I would not have black bees while I can get Italians, as the Italians are more gentle, more prolific and better workers; or at least they are for me. I have 3 imported queens in my apiary now, and I think that a crossing of the bees by raising queens from one importation and drones from another, will produce better workers than raising queens and drones from the same stock of bees."

R. R. MURPHY.

Orange Co., N. Y.—"Last spring I had 20 hives, have now 32, and have obtained about 578 pounds of honey in four-pound boxes and have about 100 pounds in frames. The hives are now all in good order with more than enough honey for wintering. The honey here is of superior quality, being made from locust blossoms and white clover; there is no buckwheat raised about this section, consequently have no dark-colored or strong honey stored in boxes. Being made from such flowers, it is the finest flavored honey produced anywhere. My apiary at New Windsor Nursery is composed of Italian, hybrids and black bees, but I find the Italian far ahead, especially in times of scarcity of honey. I had one swarm of Italians that stored in boxes 66 pounds the last three weeks of June, and have since made 22 pounds, also in boxes. Others have made 50 to 40, and so down to 10 pounds each. I use a movable-comb frame hive of my own getting up, and it has thus far proved a complete success. While some with common box hives and the old fashioned way of keeping bees have very little honey or hives, I now, after three years' practice, have more honey and bees than I know what to do with." MARCUS D. DUBOIS.

San Buenaventura, Cal., Dec. 4, 1876.—"The large quantities of honey produced in South-western California and deposited mainly in San Francisco is being rapidly sent off to all parts of the world, and sales are becoming more easy at higher figures; yet the risks of sending comb-honey long distances is making the demand for extracted honey greater; thus bringing the price of the two nearer together. This county, Ventura, young in the bee business, is one of the best in the state, and is rapidly increasing in its number of colonies, and our bee-keepers' conventions assist much in perfecting their management. We have had one shower of rain since last March, and expect some more sometime this winter, although it is now as warm and sunshiny as in July." R. WILKIN.

Nazareth, Pa., Dec. 4, 1876.—"I was at the Centennial at the time of the honey exhibition, though too late to be present at the Convention. I was pleased to meet the greatest apiarian in the world, Mr. Harbison, who has 3,000 stand of bees, and who brought in from California 100 tons of honey comb. He kindly drew a sketch of his hive, and explained his mode of proceedure and the arrangement of his surplus boxes, and cheerfully answered the many questions asked him, for which he deserves the sincere thanks of those of us who were present. I was also pleased to see Mr. Latchaw, of Barkeyville, Venango Co., Pa., exhibit his Union Section Extention bee hive; he took the sections apart, showing the combs with the adhering bees and queen. It was a real pleasure to see so many of our apiarian friends at the Centennial. Accept my best wishes for you and the continued success of THE AMERICAN BEE JOURNAL." WM. CHRIST.

Correspondence.

For the American Bee Journal.

When and How to Change Queens.

I find it profitable about once a year to overhaul and change queens. When a queen is 3 years old, even if a very good one in the spring of the 4th summer she will probably begin to fail, 4 out of 5 will do so.

We change our queens about from July 1st to 10th. Just when the white clover begins to fail to secrete honey, at that time the swarming fever is nearly over. We remove an old queen or separate a full colony from a good stock of workers and start as many queens cells as possible, and on the ninth day after, remove a good cell and put one in each hive, in the honey boxes on top. Don't disturb the old queen; as soon as the young queen hatches, she will crawl down into the hive, and at once the bees will accept the young queen. The old queen will soon be disposed of. Do not throw her out, for if the queen larvæ is 2 or 3 days hatching, they will start other cells, and throw out the young queen. Put them in a top honey box, and the bees will hardly ever cut them out, and in this way an apiary can be supplied with new queens very readily.

ALFRED CHAPMAN.

Hancock Co., W. Va.

◆

For the American Bee Journal.

Northern Minnesota Apiaries.

The season of 1876 was rather a poor one for bee men in Northern Minnesota; the spring was cold and windy. From the 20th of May to the middle of June honey was more plenty; then dry, hot weather set in, and honey was scarce till July 25, when basswood came into bloom; then honey was abundant for 2 weeks. The weather was fine and the bees stored honey rapidly. From Aug. 10 to Oct. 1 we had very unfavorable weather for honey gathering; it was cloudy or raining full one-third of the time. Honey and pollen was plenty all through the fall, although we had a heavy frost on Aug. 26 and Sept. 1; after that the nights were cold, and bees could work but a few hours each day. Nov. 9 and 10, my bees stored 2 or 3 ℔s. of honey to the hive; but what they found to gather honey from is a mystery to me; everything looked dead and as dry as a chip.

I commenced last spring with 3 stocks; when I took them out of the cellar, I transferred them from box hives into the "North Star" movable frame hive, with only good comb enough to fill 5 or 6 frames to the hive. I run them for increase of stocks. Now I have 12 strong stocks in winter quarters, in good condition. I got enough surplus box honey to more than pay me for all my trouble.

Honey-plants are plenty here. In the spring we have first the willow, poplar, gooseberry, wild currents, plum, cherry, june-berry, prickly ash, black and red haw, raspberry, with many wild flowers; then basswood and buckwheat, golden-rods, astors, starworts, and many other frost flowers. A. J. HANEY.

Todd Co., Minn., Nov. 29, 1876.

For the American Bee Journal.

Honey in Frames.

I have been keeping bees for 7 years, and in that time have taken all my surplus in frames, and like it the best. The frames of my hive are 12 inches from front to rear, which I think a very good size. The frames for surplus honey are 12x6½ inches outside measure, and contain from 2½ to 4 ℔s., according to the thickness of the comb. If I want to extract the honey, which I generally do, these small frames are very convenient, and can be removed and returned without disturbing the brood nest. If I wish to sell the honey in the comb, I find the small frames much more convenient than boxes. The bees are easily shaken and brushed off, while a good deal of skill and patience is required to get them out of boxes. Honey in such frames as I have described is easily handled, and sells very readily at good prices. If to be shipped, cases can be made which will hold the frames in such a position, and with such firmness that with careful handling there is no danger of injury to the combs.

I use no honey-board between the brood department and the frames for surplus honey. If I desire comb honey exclusively I would use a honey-board, as the queen would be less likely to deposit eggs in the upper story; but as I use the extracter largely, if a comb is blackened by having brood raised in it, no great harm is done. I frequently cut drone comb out of the frame in the brood chamber and put it into the small frames. It is better for the extractor than worker comb, as the honey is more easily thrown out of large cells than small ones.

When starting bees to work in the frames for surplus, it is important to give them two or more frames filled, or partially filled with comb. They are more likely in that case to build straight combs. While comb building it is necessary that they should be looked after occasionally as they will sometimes build from the bottom upward, and do very crooked work. I think Italian bees are more apt to begin at the bottom than black bees are. I do not wish to be understood as disparaging Italian bees. I think them much better, in more respects than one, than black bees; and I keep my Italians as pure as possible. M. Mahin.

Newcastle, Ind., Dec. 14, 1876.

* * *

For the American Bee Journal.

Important Points in the Construction of Bee Hives.

The farming community own most of the honey fields of our country; and the business of honey gathering and the management of the gatherers should be as simple and as clearly understood by them as possible. It is also desirable that it should be free from needless manipulation.

1. The shape of the hive is a question worthy of some consideration. A low, flat hive will not be as safe for wintering as a taller hive with narrower front, back and side boards. There is very little danger in the wintering of bees in hives, thus shaped, on their stands if only covered from wet.

2. A very important consideration with me is an arrangement of boxes for surplus honey, of about 5 ℔s. capacity each; 40 boxes in the aggregate, a little more or less at pleasure, placed in close connection with the body of the hive; each directly accessable to the bees.

3. With these boxes, placed early in the season, before the queen has made any arrangement for swarming, by preparing queen cells, they will give almost certain if not perfect security against the issuing of a swarm, and will in a good season give the 40 5-℔. surplus boxes full of surplus honey, more or less; depending upon the field and the season.

4. To be secure against swarming it will be requisite to have the colony of bees well shaded from the sun. Great heat, or the presence of enemies may drive them out, whatever room they may have for their operations or in whatever shape it may be.

5. This will not be a very heavy expense. Glass boxes will be paid for in the sale of the honey; 200 ℔s. of honey would sell for from $40 to $50. If no market, it would be very convenient to have 200 lbs. of first-rate honey for use in the family.

6. The expense of this annual income would be for one colony of bees say $8, and one hive say $5, amounting to $13. This whole expense is more than doubly paid the first year, and all the after products in coming years clear gain. To secure the fullest success let them send for The American Bee Journal and read it carefully.

Woodstock, Vt. Jasper Hazen.

* * *

For the American Bee Journal.

Chips from Sweet Home.

I lately had the pleasure of visiting the apiaries of Putman, at Galesburg, and Cramer and Kellogg, of Oneida, Ill. The former apiary consists of 80 or 90 hives, located in an orchard in the city of Galesburg. I saw a lot of his honey, which was choice white clover. His hives were very heavy and too full of honey for their future welfare. He has no slinger and in this he saw the need of one. He has also a lot of sections partly filled which should be emptied, the comb saved for spring. His hives and yard were neat. I found him a talkative gentleman willing to impart and receive knowledge. He thought "the disease" was caused by a draft of air through the hive in cold weather; but this is a mistake, for we had the disease in the cellar as well as outdoors, and hives all grades of ventilations. He winters out-doors, cuts off all upward ventilation, or rather wants to; in taking off his honey boxes, which were set next the frames, and then putting on the honey-board, he must necessarily leave open space around the top.

Friend Kellogg was not at home, but I found Cramer, found him a full match for me in talk, he is a live bee-keeper. His apiary, as also Kellogg's, showed care and attention. K's honey slinger is liked very much, but would prefer the Sweet Home; but his is a home-made one, and I think it a better one than any advertised. Kellog and Cramer sling all their honey and find sale at good prices. In company with Cramer we visited several small bee-keepers, and next morning before daylight he kindly saw me on the train.

D. D. Palmer.

Mercer Co., Ill, Dec. 11, 1876.

For the American Bee Journal

The Agricultural College Apiary.

The forthcoming report of the Michigan State Board of Agriculture for the year 1876 will contain the following:

Of the ten colonies of bees placed in the new cellar Nov. 26th, all but one, the experimental colony, with none but old bees, came through the winter in fine condition. That one lived till spring, and then died. These colonies were all removed from the cellar once in January, and once in March, that they might have a purifying flight. They were not removed to the summer stands permanently till the middle of April.

During the previous autumn the bees were kept breeding even into October, and consumed nearly all the pollen. Several colonies had none. These had no brood when removed from the cellar. I attempted to supply this lack by feeding meal during the last of April, but found that nearly as soon as the weather would permit the bees to fly they could get pollen, and thus would not touch the meal.

I fed sparingly of syrup till the fruit trees were in bloom, and by that time had 6 or 7 frames of brood in each hive. I also fed a little between the fruit trees' bloom and that of white clover, with the most satisfactory results.

During the season I have increased from 9 to 20 colonies, all large and in excellent condition. I also procured two Italian queens imported from Italy, but lost one in introducing. The other has done well, and from her I have Italianized the whole apiary, though I am in doubt whether all the queens were purely mated.

I did not permit the colonies to swarm, but practiced artificial swarming, or dividing. I lost three colonies, one coming out in the spring, and leaving at once, without waiting to alight even; the other two going off this fall, before I suspected any such thing, choosing Sunday of course as the time for their leave-taking. Had I previously clipped the queen's wings, all of these would have been saved. I have now no queens with unclipped wings.

I have extracted during the season 507 ℔s from the brood chamber. About a third of this was from basswood, and the other two-thirds from fall bloom, and none was extracted except from worker comb, which it was desired to keep free from honey that it might be used for brood.

During the season I have worked for comb honey, both in boxes and in small frames, and found that I could secure much more in the frames. I find, too, that the honey in small frames is liked quite as well by consumers.

In the spring I surrounded the apiary grounds with numerous honey-producing shrubs and trees, among which were basswoods, locusts, crab-apple, shadbush, etc. Most of these have done well—a few have died. These have been kept mulched, and the ground about them well spaded all the season. I have also set out more evergreens, some for a wind break, others for a shade for bees; and have started some Concord grapevines and Virginia creeper for shade. Some of the latter has been set about the house, that it may climb upon it, and has already made a fine growth. I have also set out several kinds of bee-plants of more or less repute, the following of which have done well, and all yielded bloom except the two first, which will not bloom till another season: yellow trefoil clover, yellow Bokhara clover, mignonette, black mustard, Chinese mustard, borage, common and silverleaf buckwheat, common and Chinese sunflower, and Rocky Mountain bee-plant.

The following is the summary of the account with the apiary for the year:

Dr.	
To improvement of grounds.........	$26.17
" experimental plats................	23.65
" tools	20.45
" making hives, feed, queens, and care of bees....................	84.81
Total	$155.08

Cr.	
By 11 colonies of bees @ $10	$110.00
" 506½ ℔s. extracted honey @ 16@22c.	83.19
" 148½ lbs. comb honey @ 22¼c....	33.90
" 168 ℔s. comb honey (unsold) @ 20c..........................	33.60
" 55½ ℔s. extracted honey (unsold) @ 15c........................	8.32
" 60 frames worker comb @ 10c....	6.00
" 9 unoccupied bee hives at $2.00...	18.00
" improved grounds...........	26.17
" experiments on bee-plants..	23.65
" 70 ℔s. asparagus @ 8c............	5.60
" tools, record book, etc............	15.45
" work bench	5.00
" lumber, oil, and paint on hand...	2.33
Total receipts....................	$371.41
Total expenditures..............	$155.08
Net profits on 9 colonies.........	$216.33
" " per colony...........	24.05

CONCLUSIONS FROM YEAR'S WORK.

The experimental hive, strong in old bees but which contained no young bees, as no brood was permitted to hatch after the middle of August, and which died in early spring, indicates that spring dwindling may come from the fact that there are no young bees in the hive when the bees go into winter quarters. This condition may arise either from a poor queen, a poor honey yield, or dearth of honey in autumn, when even the best queen will refuse to do duty; or, as has been the case here this fall, such a great honey yield as to give the queen no opportunity.

NATURAL SWARMING.

I have proved, what reason and a knowledge of the natural history of the honey bee would discover, that natural swarming is always suffered at a great sacrifice. This insures a queenless colony for nearly or generally quite two weeks, which is equivalent to the loss of a fair colony of bees, as a good fertile young queen will start a fair colony in this time, especially as this is generally at the time of the best honey season of all the year.

THE EXTRACTOR.

The great value of this machine has been again demonstrated during the wondrous honey yield of August and September. Although the bees had plenty of room in the supers—both boxes and frames—still they would fill up the brood space as fast as the bees came forth, so as utterly to preclude breeding. By extracting I kept the brood chamber replete with brood, while by omitting the same, breeding stopped entirely. I found, too, that this sent the queen into the supers, where she would lay if there was a possible chance; whereas she remained below entirely when room was given her in the brood chamber.

POLLEN A REQUISITE TO BROOD REARING.

The fact that there was no brood reared in colonies destitute of pollen till the bees had gathered and stored some, seems a positive demonstration that pollen is an essential element of the food of the larvæ, though it is not required by the mature bees. The rapid increase of brood in the spring would also indicate that it is as well, if not best, that the bees have no pollen till they can fly out in spring.

FEEDING MEAL.

The observations the past spring, sustained also by those of 1874, show that bees are pretty apt to be able to gather pollen as soon as it is best for them to fly in the spring—by the middle of April—and that feeding meal is unnecessary.

EVERGREENS FOR SHADE.

Evergreens for shading the colonies, especially Norway spruce, not only serve an excellent purpose, but can be trimmed so as to make the apiary grounds very attractive from their beauty, and are to be strongly recommended.

SAWDUST ABOUT THE HIVES.

The sawdust about the hives, underlaid with brick, by keeping the grass down serves an excellent purpose, as it enables one to see at once any bees that fall upon it, and thus ensures against loss of queen.

LATE FALL FEEDING.

As all the bees wintered so well during the past winter, I could see no special difference between those fed late the previous fall and those that were not. All bred so late as to vitiate the experiment.

HONEY-PLANTS.

The experience of the summer shows that the following honey-plants not only yield well, but that they bloom from early in July till autumn, covering a period when there is a dearth of native honey-bloom:—mignonnette, borage, and black mustard. Chinese mustard is inferior to black mustard. It blooms earlier, and the bloom fades away much sooner. Sunflowers are unworthy cultivation, while the Rocky Mountain bee-plant blooms too late to be valuable where there is plenty of fall bloom native to the region. With no native bloom to furnish autumn honey, it would be valuable. All of the above do well on light sandy soil.

GOLDEN-ROD HONEY.

Our autumn experience proves that golden-rod honey, though rather dark, is of very superior flavor. Several good judges have pronounced it superior even to linn or white clover. A. J. COOK.

* * *

For the American Bee Journal.

Pasturage.

What is the cause, in this vicinity, that bees cease to do as well as they have done formerly?

What can be done by bee-keepers that the yield of honey in the future will be as good as it has been in the past?

The above two questions have been discussed in a meeting held at Jefferson, on December 4th, by members of the Jefferson Co. Bee-Keepers' Association.

It was claimed that one of the main causes is the reducing of the forest trees by the woodman's axe, such as the basswood, poplar, oak, elm, and hard and soft maple. These trees have always furnished abundance of surplus honey and pollen, but where said trees are cut down and the land tilled with crops that yield no honey, it cannot be expected that bees will gather as much honey as before.

It was also claimed that the last two or three seasons the blossoms of the flowers and trees did not yield as much honey as they have done in former years in this section, on account of the unfavorable weather —drought, heavy rains and north wind prevented the secretion of honey in flowers. It was further claimed, and conceded, that this section of country is now overstocked with bees, flowers not being so abundant now as formerly, and on that account pasturage for so many colonies of bees kept here is insufficient. The above are the main points claimed to be the causes in answer to the first question.

In answer to the second question, it was stated that it is necessary for bee-keepers to cultivate artificial pasturage and study the honey season in this vicinity, and learn to know when to expect a good flow of honey and when that flow comes, to be prepared for it; to manage his bees so to have them strong and in the very best condition to gather honey. Bee-keepers who own land should sow alsike, white and lucerne clover, buckwheat, rape, etc., and they should also induce farmers to do the same. It was claimed that alsike clover compared with red, is not only superior in yielding honey but is also superior in many particulars as food for farmer's stock. The following are some of the advantages of the alsike over the red clover: 1. Cattle like it better, both for hay and pasture, on account of the stem, which never gets as hard as the stem of red clover. 2. It is not so liable to freeze out in the winter as red clover. 3. It yields always a good crop of seed, which sells for a high price. 4. It can be cut twice and sometimes three times during the season, if sown on bottom land.

If bee-keepers can satisfy farmers that the above points of superiority are correct, they will as a matter of profit cultivate the alsike instead of the red clover, and thereby not only advance their interest but also the interest of bee-keepers.

Buckwheat is another honey plant which should be cultivated more freely. In some seasons it yields abundance of honey, which is good enough to winter bees on, although it is rather dark and unsalable. Buckwheat flour commands a ready sale at good prices, and bee-keepers should try and induce farmers to cultivate it more freely than they really do.

Rape is also a good honey plant, which, if cultivated will be profitable for bee-keepers and farmers. Lucerne clover is considered by some bee-keepers superior to alsike, in yielding honey for bees and fodder for stock. Beyond the above mentioned honey plants, bee-keepers should also cultivate Spanish-needle, golden rod, thistle, raspberry, mignonette, catnip, etc. These seeds may be strewn in fence corners or any uncultivated places about the garden, farm, and road.

It was further suggested that bee-keepers in this vicinity should not keep as many bees, or if they do, should try to spread them over more country; they should also prevent swarming, if possible, and not increase their stocks in numbers but raise more honey.

After the discussion of this subject, it was conceded by all bee-keepers present, that bee-culture will pay yet, if the above mentioned honey plants are cultivated more freely by bee-keepers and farmers, giving bees a continuous forage and an opportunity to gather as much honey in the future as in the past. C. GRIMM.

Jefferson, Wis., Dec. 14, 1876.

For the American Bee Journal

Letter from Kansas.

EDITOR JOURNAL.—It is some time now since I have written anything for the JOURNAL. I don't know as I am as much of an enthusiast in bee-culture as formerly, but still I make it a specialty and I read the JOURNAL, yet probably with not as much zest as formerly, because I don't find as many new things in it as when I was new in the business, still it is quite interesting at times and even amusing. The take off on H's new apiary is good. The fact is, Mr. Editor, new things and great discoveries in our favorite pursuit are too old foggish in their movements. We shall all be dead before any great discovery will make us all rich—that really is the goal to which all aspire. We do not mean that all aspire to the same kind of riches, but the almighty dollar is the motive power to the great bulk of humans. Some have higher and nobler motives, but the coming bee is what we are after now.

There is no use of discussing the question of the coming hive, that question is already exhausted, as an examination of the records at the Patent Office will show. Great men like Adair and Gallup have exhausted their inventive genius on this question and sunk into obscurity. But the field is open for the coming bee. The Italians were a great improvement on the black, so thought many bee-keepers, and more especially those that had queens to sell. The Albino is the latest invention to catch a few pennies from the uninformed. The idea that it will be any improvement on standard Italians and blacks is not to be entertained. This coming bee must be insect and bird proof, in fact it must be large enough to gobble up a toad and king-bird, as those "birds" now gobble up our little bee of the present. They must have the hardihood and agility of our Kansas locusts. They must be able to carry several pounds of honey, the more the better; and all the bee-keeper will have to do will be to fill his yard full of empty barrels with a hole in the same for the bees to dump in the honey; and this bee will neither need hives nor build comb, the expense of the hives and honey extractors will be saved.

Now when this bee is produced it must be owned by only a few trusty and honorable bee-keepers in each State, that have sense enough to keep a good thing to themselves. Then C. O. P. and A. J. K. will have the exclusive privilege of manufacturing comb and putting the honey into it, as it sells best in that shape; and when the former would be relieved from the arduous work of manufacturing honey (as he is now accused of doing by some), no doubt his skill and ingenuity would soon enable him to produce full grown combs in all their beauty and loveliness. But we learn by the proceedings of the Mo. Valley bee-keepers' meeting that all honey is manufactured. This opinion would have greater weight with bee-keepers if the great entomologist had not shown a presistency of sticking to an error in relative to bees injuring fruit, worthy of a greater man. He will persist in this error, no doubt, until he actually believes he saw bees roosting on the grape trellis chewing down grapes and flipping the seeds at each other.

He has no doubt read many works on entomology, and has a smattering of that science and he may be able to tell a bee from a grasshopper. But as a grasshopper prophet he proved an entire failure. His excuse was that the brood of locusts that he predicted would not visit Kansas this season did not, but a new brood that he had not seen, was what devastated the country. If Congress had created a commission and sent him up to the Northwest, he would have seen this new brood and become acquainted with them and advised them to "Go West, young 'hopper, go West," and Kansas would have been saved. See what the parsimony of Congress has done in witholding a few paltry thousands from this enterprising chap.

"Patent" is another thing that creates a smile as we read. We are told in an article in the last JOURNAL that T. F. Bingham has letters patent on three little sticks nailed together. Now this is enough to make anyone that is not of a religious turn of mind, laugh right out in meeting. Now, Mr. Editor, it ought to be the mission of an independent bee journal to expose this humbug patent business. If the bee fraternity are generous enough to encourage everybody to go into bee-keeping, and thus reduce their own income by an over-supply of honey, they ought to be honest enough to try to shield the new beginners and the uninformed from being duped by patent vendors. Mr. Gallup once obtained great notriety as a humbug exposer. Since his day we have had no regular humbug ventilator. Probably the sad fate of that worthy brother has deterred others from entering the field.

A few more words about patents and we will close, although we wanted to say something on another subject which we will have to reserve for another time. We have our doubts whether there is a single patent on bee hives or anything in connection with them that is worth a cent, but to the vendor that will catch their dupes. A great majority of them could not be sustained in court. Most of them when simmered down to the real point—patented—if it could ever be ascertained, that if understood no one would be fool enough to pay money for it. To illustrate, a man wants a patent, and he paints a white stripe around the bee hive a few inches from the bottom, and he claims a patent on the hive as moth proof. He claims that the white stripe attracts the miller, the same as a light, and it flies against the hive and knocks its brains out, and the patent is issued on the combination of a white stripe on a bee hive to prevent the moth miller from entering. This is a good sample and, I am told, is actually one of the many patents on bee hives. But there is a queer notion entertained by the people that a patented article must be good, and, as Barnum used to say, they like to be humbugged.

If any one ever exhibited an article at a fair that was not patented, by the side of a patented one he would soon see this peculiarity. The first question would be, what is this? Bee hive! Is it patented? No! Pass on to the next, without farther examination or inquiry. What is this? This is my patent bee hive, moth trap and honey extractor three patents on it. Here is the drawer that you can pull out and fill with cups and tumblers, and the bees will fill them, and you can extract honey any time you want. Here is the hole for the millers to enter and they go down in that box and can never get out, and here are the two holes for the bees. Dear me! just come and see this patent hive and honey extractor. I have had three gums of bees for several years and they have done no good, and I believe the miller is what is the matter with them. What do you charge for the patent? Only $10 including a hive. Well, I must have one.

N. Cameron.

For the American Bee Journal.

Union Apiary.

Mr. Editor.—The honey season is over, partially filled boxes stored away, frames of empty comb taken care of, and our little friends "tucked in their little beds" for their long winter nap. And the bee-keeper can now strike his balance-sheet and see how he stands.

Our own apiary has increased from 36 to 81 colonies, we have secured 1.300 ℔s. of extracted honey and 800 ℔s. in boxes and small section frames. Of course this is nothing to brag of, but it is the best we could do under the circumstances. We might have got more surplus but our bees at the "French Pavilion" got the "old Harry" in them about the middle of July and commenced swarming, and we thought from the way they acted they were going to keep it up all winter. It seemed as if a lion stood in the doorway or on the portico. Out they would come. It is all well enough to talk about controlling swarming by cutting out queen cells and giving more room and all that, but our bees were on a "big tight" and some of the old colonies literally swarmed themselves to death; thus you see intemperance even in bees is ruinous to the most prosperous families.

Taking the hint from small section frames, we divided our apiary into sections, and find thereby we secured more honey than though the hives were compact and all huddled into one yard. We divided our apiary into three sections: the first we called the "French Pavilion," because it is located in a French community; the apiary at the French Pavilion is devoted principally to surplus honey and a full use of the extractor, and is stocked in the spring with our strongest colonies. Another apiary is located at "Carpenter's Hall." On this section we depend for our increase of stocks by artificial swarming, etc., and here all the hives are manufactured, invented, repaired, etc., for the Union Apiary. The third section is called "Sugar-loaf Apiary," located on an eminence commanding a beautiful view of the valley below. In this division is kept our choicest queens and finest stocks, and the energies of this apiary are devoted principally to queen rearing to supply our stocks with choice prolific queens. Many of our best queens, however, were ruined the past season by mating with black drones from the numerous colonies of common bees in the valley, especially an old fogy apiary at Asher's Corner, the proprietor of which is opposed to bee journals, Italian bees, honey slingers, etc. And although it may be humiliating I am forced to confess, he almost always has as much surplus honey to sell as any of us.

Owing to the swarming fever attacking the "French Pavilion" in July there sprung up quite a rivalry between this section and the "Sugar-loaf Apiary" as to surplus, but owing to a couple of deadnings very near the "French Pavilion" which furnished an abundance of fall pasturage the greatest amount was gathered by the latter, but owing to the source from whence it was gathered was not thought by many to be of as nice flavor as that procured by "Sugar-loaf" from clover, linden and golden-rod. I will say right here that we have no trouble whatever to find a home consumption for all the honey we have had so far.

Now, Mr. Editor, we are too far advanced in apiculture to believe very much in tin pans, bells, etc., in an apiary, but when our "French Pavilion" commenced to throw out 4 and 6 swarms per day we were glad to have a bell in this section, not to settle the bees but to notify us at the office and store when a swarm was in the air, and from the way we have heard the silvery notes of that bell on certain occasions I have thought the clapper was really hung in the middle. But so long as we keep bees we hope never to be deprived of just such a bell in the Union Apiary of Jones, Carpenter & Co.

Dec. 1, 1876. Sea G. Wick.

For the American Bee Journal.

How to Double up Hives.

There are several ways, but the following is the most successful I have tried. I use 3 hives, for convenience will number them 1, 2, 3. No. 2 to be doubled with 3. If Nos. 1 and 2 are some distance apart, draw them each day a foot or so nearer each other until they are only about a foot apart. The object of drawing them a little at a time, is to prevent a confusion among the bees. No. 3 ought to be some distance away from the others. Having completed the work of arranging the hives for doubling as above stated, take all the frames from No. 3, except one without brood, after brushing off the bees put them into No. 2, or any other hive, if you have more than you want for No. 2. This should be done during the day. That night take No. 3, move it away from all other hives some 40 or 50 feet and put No. 2 in the place where No. 3 stood. Move No. 1, which was only one foot from No. 2, into the stand from which No. 2 was moved, both being done the same night. Next day many bees in going out from No. 2 will perhaps return to their old stand and there find No. 1, but being laden will enter No. 1 with out being disturbed. Also the bees of No. 3 on going out will perhaps return to their old stand, find No. 2, and being ladened will also enter without being disturbed.

About 12 o'clock on that day go to No. 3, and throw open the entire top of your gum, the bees will go almost immediately to No. 2, and that being scented by that time with the ladened bees from No. 3, will allow the balance of them to enter undisturbed. You should, however, have taken the queen from No. 3, before opening the gum, killed or caged her as you choose. If the bees of No. 3 do not go immediately to No. 2, on opening it, shake them down in front of No. 2, they will enter unmolested. You have one frame left from No. 3, put it in any hive you choose, but be certain you do not disturb Nos. 1 and 2 on that day. I have doubled several hives this fall on this plan, and did not have a bee killed.

Crystal Springs, Miss. J. W. McNeil.

Our National Society.

To the Bee-keepers of North America:

At a recent meeting of the National Convention of bee-keepers, which assembled in Philadelphia, much to my surprise I was chosen as its chief officer. In accepting the position I promised to do all that I could to promote its interest, and to that end I ask the aid and co-operation of all who desire to see a permanent national organization, and if there are any opposed to a national organization I would ask why? In our country nearly all trades and occupations have their organizations. We have the Grangers, representing the farming community; the Locomotive Engineers and Typographical Unions,representing their interests; besides various others which I might enumerate but deem it unnecessary to do so. If we are to have a National association of bee-keepers. what are the best means of promoting its interest? That there is a need for such associations, for the benefit of bee-culture, I have only to refer to the many local associations existing throughout the country. The lamented Quinby once wrote: "I cannot conceive of a plan better adapted to the better diffusion of knowledge in bee-culture than the one already in practice. Let us encourage the formation of as many associations as possible. A half dozen live bee-keepers cannot meet and talk one hour without gaining something. The best of us are indebted to others for every idea we possess; not always in expressed forms but for material, that when combined gives it form. Free discussion will do much; each member can visit these small gatherings, and if he does not know much he may learn something every time and treasure it up, and with any experience of his own bring it to the National Convention next year and present it for the good of all, and in turn gather up the new ideas that are presented by others to take home to the little circle in exchange for what they furnished; they will again tell it to their neighbors, who put it in practice, and profit by many things that would never have been dreamed of but for this organization."

It occurs to us that Mr. Quinby gives the key note in the above extract, viz,: "The encouragement of as many associations as possible." Let such associations be formed by all means. We do not wish to appear egotistical, but would say that it was through our efforts that the Maury County Bee-Keepers' Society was formed, and it was to us a profound pleasure, to hear it referred to in glowing terms at the National Association. The remarks were not made in any spirit of flattery to us, for the speaker was unaware of our presence, and had no acquaintance with us. I have referred to this matter that I might state the manner in which the organization of this Society was brought about and suggest it as the means for the formation of others.

I had conversed with bee-keepers from every portion of the county, and from these conversations learned that there was an interest felt in bee-culture. I addressed a postal card to some twenty-five, requesting them to meet at a certain hour and day at a given place. Some 8 or 10 responded to the call. We organized by electing officers and adopting a constitution. The names of bee-keepers were called for and about one hundred names obtained. A day of meeting was fixed and a postal card sent to all inviting them to be present and participate in the next meeting. The result was, we had about thirty in attendance at the next meeting.

Now I would suggest that some active bee-keeper in every county (and I am sure there is one such in every county) take it upon himself to pursue a like course, and I will guarantee that a *nucleus* will be formed which will soon become a populous *colony*. A few hints in the formation of these societies we do not think will be amiss. As funds are essential to the successful prosecution of any enterprise, let there be a membership fee—a nominal sum, just sufficient to defray any incidental expenses, is ample. In selecting your officers be sure to select a live and active man for secretary. Then provide him with blank notices printed on postal cards, require him to fill these blanks and send them out, a few days previous to each meeting to every bee-keeper in your county. The labor with these blank cards is light—a hundred of them can be filled up in an hour. After a few county societies are organized, steps might then be taken to organize a State society.

We hope many such societies will be organized during the year, and would respectfully request the secretaries of all bee-keepers' societies, now in existence, or which may hereafter be organized, whether State or county to forward us their names and postoffice address, so that we may be able to report their organizations at the next assembling of the National Society.

I would further suggest that all these societies become auxiliary to the National Society, and that there may be an interest in them aside and apart from the benefits to be derived in gaining a wider knowledge of bee-culture—that there may be a beneficiary system adopted, similar to that now in vogue with the Locomotive Engineers; make the National secretary and treasurer, salaried and bonded officers. Whenever a member of the fraternity dies, require the secretary of his local society to notifiy the secretary of the National Society, then require the latter to give notice to all local secretaries, and call upon the members for such a sum as may be agreed upon, to be paid in a given time. Such sum when collected to be paid over to the widow or nearest relative of the deceased. If such a system is adopted, as a matter of course there will be a number of details necessary in its arrangement which it is useless here to enumerate. We now wish to briefly give a general idea.

It is estimated that there are seventy thousand bee-keepers in the United States. If a membership of ten thousand can be thus enrolled, a per capita tax of 25 cents would raise the sum to $2,500, or a 50 cent tax would raise the sum of $5,000. To obtain a life insurance policy of $5,000, a person who had arrived at the age of 30 years would have to pay an annual premium of about $80 or $85, in the non-participating plan. By the above plan, with a per capita tax of 50 cents there would have to be about 160 or 170 deaths, which is hardly probable before that sum would be paid out, yet even if it should reach that sum the instalments called for being in small sums the amount would scarcely be missed or felt.

These thoughts have been hurriedly penned and are thrown out with the hope of enlisting an interest on the subject. We hope all bee-keepers will speak out or write out their views for the bee journals, or communicate with us by letter. Let the matter be thoroughly discussed before our next meeting. While these ideas have suggested themselves to my mind, others may have better plans to suggest ; if so, I beg you to give them.

In conclusion I will add that many benefits are to be derived from these associations. Those who attend them are brought into closer social relations, thereby promoting harmony and a more fraternal feeling, and those who cannot or do not attend will be amply compensated for their membership fee by a perusal of the proceedings, which shows the progress being made in this important branch of rural pursuit.

Yours truly, WM. J. ANDREWS,
President National B. K. Society.

For the American Bee Journal.

Queries.

ED. A. B. J.—On page 257, Oct. number A. B. J., you express a doubt upon the effect the clipping of a queen's wings has in producing a tendency to supersede her. And as experience is the only school of any value I give you my experience in three several instances which, to me, seem to throw light upon that subject.

First.—I caged a young queen just hatched until a sister was hatched and mated in the same hive. I then removed the fertile queen and allowed the bees to release the virgin queen. I saw her return from her bridal trip, and the bees seemed so hostile to her that I at once opened the hive and found her "hugged" and one wing so much twisted that she was unable to fly ever afterwards, but not otherwise apparently injured. I caged her for 24 hours and released her. She proved a prolific layer, but within a month was superseded

Second.—A two-year old queen being too heavy to go with her swarm was so injured in her wings upon being returned to the colony that she could not fly. After three frustrated attempts the bees succeeded in superseding her, but when I first missed her the combs were full of brood from eggs up to hatching stages, and a young queen ready to mate. It could not have been old age or injuries, else she would have ceased her laying to some extent at least.

Third.—A queen introduced in haste last year, but not carefully, had her wings injured by the bees, one being gnawed half away. I immediately found the bees wanted to supersede her, and by keeping a close watch I kept her all O. K. until winter. She was very prolific, and this spring I found the same tendency to raise a young queen, but by close attention I kept her mistress of her home. There was never but one cell at a time to be found and it was invariably on the edge or end of a comb and distant from the main brood nest. On two occasions I found the young queen already hatched, but by removing brood and inserting empty brood combs and empty frames I prevented any effort at swarming. She is at this date (Oct. 12) apparently as vigorous as ever and has kept her colony up with brood, notwithstanding queen cells were reared at least six times in her hive during the past summer, from four of which I now have nice healthy queens. Was it not her wings that caused these attempts to supersede? This conclusion would seem irresistible in the last instance. J. E. R.

For the American Bee Journal.

Interesting Discussion in Germany.

QUESTIONS ON BEE-CULTURE DISCUSSED BEFORE THE 20th GERMAN CONVENTION OF BEE-KEEPERS, HELD AT STRASBURG, SEPT. 14, 15, 16 AND 17.

1st Question.—Dr. Dzierzon, lecturer.—*What influence, on the colonies of bees, has the last winter had, which has been long, rigorous and snowy; and what practical lessons did we gain by it?*

The lecturer cites the bee writer Ehrenfels, who estimates that in an average winter the loss of bees amounts to about 5 per cent. Last winter has made a great many more victims. It was so long, so cold, and so severe. An early cold is never so fatal as a late frost, and last winter was very cold in the latter part. Besides the quality of honey was not very good in spring. Honey from pine blossoms and honey-dew generate dysentery.

What practical lessons did we gain by the last winter? I answer that we have learned that it is not safe to leave too much honey in the hive for winter, either at the top or at the side of the brood chamber.

Prof. Geilen thinks that if bees have only heath honey to winter on, their life is endangered.

Prof. Lehzen is of an opposite opinion.

Prof. Ilgen adds that honey from rape crystalizes easily and is not fit for winter.

Mr. Deichert thinks that honey-dew ought to be extracted from the hives and replaced by candy sugar.

Mr. Rabbow thinks that rape honey makes the bees thirsty.

Huber answers that this assertion was never proved.

Hilbert wants plenty of air, and gives his bees eggs with milk.

Kneip's bees had no rape or heath honey, yet he lost a great many colonies.

2nd Question.—Dathe, lecturer.—*By what means can we increase our honey crop?*

The first condition is a good pasturage, which don't exist outside of prairie lands. Then a favorable temperature; and by helping the strong stocks, by giving them empty combs as often as necessary, you will get much honey by uniting all the feeble colonies before the main honey crop; for a strong colony will give more profit than four small ones. The production of wax should be limited, by giving empty combs. He also recommended to put a weak colony in place of a strong one, and to add some brood comb.

3rd Question. —Dzierzon, lecturer.—*The caging of the queen as a means of increasing the crop of honey. Is it to be recommended, and in what condition?*

Dr. Dzierzon thinks that it is generally conceded that caging increases the honey surplus; but it is not convenient under all circumstances, for it stops breeding.

Dr. Asmuss speaks of sugar and eggs mixed and used as a speculative food.

Dr. Tollman asked Dr. Dzierzon how long a queen can be shut up in a cage without danger for her life.

Dr. Dzierzon does not like a long confinement, but he cannot mention the precise time.

Mr. Kimble spoke about giving air to the honey boxes.

Kneip asserts that Carniolian queens are very good layers and give a great many swarms, but that they give little honey.

Dr. Tollman advised to give a current of air through the honey boxes during June, July and August.

Ilgen thinks that the caging of the queen produces a great many queen cells.

Hilbert speaks against the caging of queens, and advises to make strong colonies by adding brood comb till late in the season.

4th Question—Walter, lecturer.—*On the raising of queens, and gave a description of his nuclei.*

5th Question—Lehzen, lecturer.

There are in the Province of Hanover 216,000 hives, and 32,000 in the cities. The Kingdom of Hanover ranks first in bee-culture, on account of the skill of its bee-keepers. The bee-keepers of Lunebourg cannot experience serious losses for they are always ready for every emergency. He who wishes to become a master in bee-culture must be an apprentice for at least two years or he will not be trusted with the management of an apiary. The main honey crops are from buckwheat and heather. This last flower blooms from August 7th to September 16. An abundant feeding in spring promotes an abundant swarming. The lecturer praises especially the common straw hive and the comb straw-hive of Gravenhorst.

Dr. Tollmann says that it is very detrimental to bee-culture, that the owners of large tracts of land don't care about bees, and when asked, answer: "We do not understand that business." They take care to give a shepherd to their flocks, and could as well have a bee-keeper for their bees.

Hilbert adds that it is not the man but the season which gives honey.

6th Question—Dr. Tollmann, lecturer.—*Can the bee-keeper influence comb building?*

If I had to give a short answer I would say yes. But you would not be satisfied, so I will develop my answer. We already know that all the first swarms are much inclined to build drone cells. On the other hand the after-swarms like to build worker cells. Now, if we give to a first swarm a large drone comb inside of its incipient worker comb, as these bees desire drone cells, they will more likely construct worker combs from top to bottom of the frames.

[These propensities ot the swarms can easily be explained. A good, young, laying queen prefers to lay in worker rather than in drone combs; and as long as her laying goes on *pari passu* with comb building she will obtain from the workers none but worker comb. But the last part of July arrives: dryness cuts short all gathering of honey; then the workers cease to build combs. Yet the young hatching bees leave a great many worker cells, which remain empty as long as honey is scarce. Now August comes with its flowers. There is honey in the fields; the queen resumes laying, but she has all these empty cells to furnish with eggs. Then the workers, having no more the desire of the queen to satisfy, give place to their propensities, which prompt them to build drone combs. It is not the same with the after-swarms, which are always behind hand with their queen in the building of combs, and defer to her manifested desire for worker comb.

The remedy of Dr. Tollman is therefore quite illusive.—CH. DADANT.]

A swarm will build more readily if it is fed with liquid honey.

You know that Dr. Dzierzon proposed that experiments be made, to know if bees would build cells larger than drone cells, so as to give the means of emptying the combs without using the extractor. I gave my bees some of these comb foundations with cells larger than drone cells; it was while linden was blooming. The bees destroyed these foundations to make smaller cells. So in lieu of large cells there remained only drone cells and these cells were so irregularly constructed that they were unfit for drone brood and could only be used as store cells.

7th Question — Dr. Dzierzon, lecturer.—*Which could be the simplest and most advantageous building of frames?*

The lecturer said that the upper part of the frames could be of wood, and the three other sides could be made of tin.

Bastian likes bottomless frames.

Winter prefers them made entirely of tin.

Gunther objects that such frames would let the combs drop in winter.

8th Question—Dathe, lecturer.—*What are the requisites in pastoral bee-culture to obtain good results?*

[Pastoral bee-culture means transporting bees to localities where they can find blossoms.—CH. DADANT.]

The lecturer said that the bee-keepers of Lunebourg have acquired in pastoral bee-culture a skill which it is impossible to find elsewhere. He describes the hives—the most easily transported—and says that the hives of a uniform width are the most convenient for that kind of bee-culture.

9th Question—presents no interest.

10th Question—Dzierzon, lecturer.—*How to obtain an amount of wax without cutting or breaking the combs?*

Mehring feeds his bees with malt, and they produce a great deal of wax. This wax is not worked in regular cells but in the form of thimbles. Boiled malt should be prepared every day, for it sours very soon.

Mehring has studied his method carefully, for his crop of wax is important.

Jenssen says some interesting things about the production of wax.

Kneip gives his bees white of eggs mixed with flour and sugar to produce wax. He mixes with one egg, two tablespoons of candy and three tablespoons of flour.

11th Question—Not interesting to us.

12th Question—Emile Hilbert, lecturer. The lecturer asserts that his foul-brood colonies were cured by a dissolution of salicylic acid. He used 50 grammes of salicylic acid in 8 times as much alcohol, he mixed 50 drops of this solution in 50 grammes of water. He injected this liquid into the foul cells, then he mixed a little of this medicine with honey and gave it to the bees. So the medicine was administered internally and externally. All his sick colonies were cured. CH. DADANT, Translator.

For the American Bee Journal.

Introducing Queens.

Mr. J. H. Nellis seems to be dissatisfied with a few remarks that I have made in the September number of the A. B. J., on his method of introducing queens.

When I write something for the bee journals it is neither to make fun, nor for love of criticism or contradiction. It is because I think that what I have to say will increase the knowledge of bee-keepers, either by my experience or by provoking discussion.

On the subject of introducing queens, I disagree with Mr. Nellis, who is one of our customers. I am therefore grieved to have displeased him, though our discussion will serve to elucidate this important question. No method of introducing queens can boast of being successful in every circumstance. I have tried all the processes so far known, (those described by Mr. Nellis included) and given the preference to that which gave us the best results. Our experience on the subject is very extensive; we have introduced, this year, at least 300 queens; and have lost none during the months of May, June, July and August. In September and October our success was not so complete, our loss amounting to about 5 or 6. But our past experience proves that, late in the season, the result is always more doubtful, whatever method may be pursued.

We remove the queen to be replaced, and at once put the cage containing the queen to be introduced between two brood combs; we put no bees with the queen; after 36 or 48 hours we remove one of the corks of the cage, which has been put slanting, and one of its corks level with the top of the frames. in place of the removed cork we put a small piece of comb honey; the bees gnaw the comb and liberate the queen, who directly after her exit, is in her right place, on the brood comb, among the nursing bees, in a quiet colony: for our removing of the cork has not disturbed the bees, and was so prompt that no robbers crept into the hive.

The method of Mr. Nellis needs nearly twice as much time as ours. In both methods we look for the queen to be replaced. Then with us the work is nearly done; for the opening of the cage is nothing, and is made without exciting the bees. With Mr. Nellis half the work remains to be done, for you must wait 9 days, then look for and destroy carefully all the queen cells. This takes time; for it is necessary to examine every comb, one after another; it being a common occurrence to find queen cells on combs where there is no other brood. Besides this, lifting of combs gives the robbers a good chance to invade the hive, and the life of the introduced queen is endangered; for she might be taken for one of the intruders and killed; especially if she is frightened, as is often the case. Mr. Nellis objects that the caging of the queens will not do for those that have been long confined. For many years we have used this method and, no other, to introduce our imported queens. These queens on their arrival are impregnated with the smell of dead and decaying bees, dysentery, sour honey, etc. The queens are tired and in the worst possible condition; yet during the past three years we have introduced more than 500 imported queens by this method, with the best results.

Mr. Nellis says that the bees will sometimes refuse to feed the queen. We have yet to see a case where bees have voluntarily left the queen alone. Even a stock not queenless, which you give a caged queen to nurse, will have amongst the angry workers who want to kill the strange queen, some good-natured bees who feed her. Let friend Nellis try it and report. At several times we gave as many as six caged queens to the same colony, all were fed by the bees.

We know only of two things that will cause the queen to die of starvation when caged. First, if the caged queen is introduced in a colony that has been much disturbed to find its queen, and where robbers have had time to take possession of the hive. The bees, troubled by the intruders, remain a long time before regaining their quietness, and may forget to feed the queen. If she is hungry, one hour without food may kill her. Second, if the stock is feeble, the weather cold, and if the bee-keeper has put the cage too far from the brood, the bees may desert the queen and let her starve. Both these evils can be avoided by putting the cage against sealed honey. It is of very rare occurrence that there is no sealed honey at the top of combs containing brood. The pressure of the cage against the honey will burst open a few cells, where the queen can feed herself. We use nothing to keep our cages in place but the pressure of the combs between which the cages are placed.

Another objection of Mr. Nellis' is that bees will prepare queen cells when their queen is removed and another given them caged for 36 or 48 hours. Never have I noticed such an occurrence; if it happens it is very rare. The colony, as soon as recovered from the trouble caused by the raising of the combs, looks for its queen. They find the new queen, just in her place, not far from the brood. There are eggs in the hive, the workers cannot imagine that these eggs were not laid by the caged queen, and they are satisfied. But if the queen remains caged for 5 or 6 days, there are no more eggs, no young hatching brood to nurse. Then the workers fear that the queen may be injured, and they begin to form queen cells.

It may be that the delay in the laying of queens introduced late in the season is caused by want of honey and the parsimony of bees when they find nothing in the fields, the introduction of queens is more risky at that time. Then a distribution of syrup previous to the introduction would give good results, if robbing be very carefully avoided while feeding. We will try it next year and report.

At the National Convention, as reported in the A. B. J., page 301, Mr. Nellis made several objections to our method. Six bee-keepers took part in the discussion, Mr. Nellis being one of them; five sided with our method, and none reported bad results from its use.

Now I will say that most of the queens sent by us which have been killed or not well received by the bees, have been introduced in colonies which had been queenless for several days, and it is this ill-success which incited me to write the article criticised by Mr. Nellis. Had these unfortunate bee-keepers followed exactly the instructions of Mr. Nellis? I cannot say. But it should be remarked that a stock of bees after having remained queenless for a few weeks is very prone to kill the queen introduced.

Besides, I think that if you destroy the queen cell after 7 days, and introduce the queen, with the confidence that the queen will be accepted, because the bees have no material on hand to raise queen cells, you will find more than one disappointment. I have two experiments in support of this assertion.

We do not usually remove our best queens to raise queen cells from their brood. To do that we deprive a stock of its queen and exchange all its brood combs with bees, for a similiar number of brood combs taken from our selected colony. Of course the queenless colony has no other brood than the brood of our selected queen to raise queen cells from.

Now, according to Mr. Nellis, 7 days after our exchange of combs, the combs introduced in our best colony have no more brood fit to raise queen cells. But such is not the case. For one day we exchanged 4 combs of brood which had been introduced for 7 full days in a selected colony; and amongst the queens hatched from these combs some were black, entirely black; there being in the combs of the black colony from which they were first taken, some brood yet fit to be changed to queens. Now we wait 9 days before considering our combs safe to be exchanged a second time.

One day I received an order for 5 or 6 queens. I had a colony queenless for seven days. I thought that there could be enough queen cells to replace the queens ordered, and went and counted the queen cells the bees had prepared so as to advise my customers of the day I could send them. I opened the hive and found only 3 queen cells. I visited carefully all the combs, to see if there were no incipient queen cells, and could find none. On the tenth day I opened anew the same hive, to cut out the queen cells, and lifted the comb on which they were, when I saw on another comb 5 queen cells not yet sealed. Therefore, on the 7th day these queen cells were not elongated yet, although their grubs had already received some royal food.

Now, let us suppose that on the 7th day we had destroyed the three queen cells and introduced a queen; this queen would probably have been killed, or would have been well received by some workers and roughly handled by others, and finally be killed. We would have accused the bees of being fickle; or the breeder of having furnished a poor queen, which was sick, as she died a few days after her introduction; or was a poor layer, as she was superseded by the bees.

From the above facts I take the liberty of advising bee-keepers who will persist in the method indicated by Mr. Nellis, to wait nine days before removing the queen cells; for there is but little security if these cells are destroyed on the seventh day.

CH. DADANT.

For the American Bee Journal.

A Visit to a Canadian Bee-keeper.

MR. EDITOR: I have just paid a visit to the land so much celebrated for "neutral tints" about the time of our national unpleasantness. Of course while in this land of enterprise and invention, I could hardly come back, without embracing such a splendid chance to exchange my old foggy notions for modern ways of doing things. Accordingly I wended my way to the home of the gentleman who paid me a visit, a short time since, and not being quite over an American drunk, got the impression that my hives set on posts, and that the surplus boxes were boxes of dirt, and that a patch of sunflowers in a neighbor's yard a half dozen yards away, were just going to meet him in the face.

Well, I found my friend *sober* this time, and in the apiary with a hive open, a comb out, peering into the cells with a telescope.

"Good morning," said I.

"Why, bless my soul, if here an't Box-hives," "How do you do?"

"What seems to be the trouble?" said I.

"I ain't getting any surplus this season," said he, "as I can't get my queens to face the north, when they back into the cells to lay."

"What difference does that make?" said I.

"Well," said he, "Probably *you* couldn't comprehend it, but scientific bee-keepers, have found out, that if the queen's don't face the north with heads downward when they lay, the abdominal viscera, pertaining to the monacular functions predominating over the lactial ligaments, are too apt to become emaciated and failure ensue."

"Oh, you may laugh, but we KNOW, you see, for 'the proof of the pudding is chewing the string,' and we don't get surplus honey enough to put in tea."

"Of course you can never know much about apiculture, with box-hives."

"I see I am rather behind," said I; "but what is this?"

"That is a Jewell Davis nursery."

"Here is a curious apple pearer," I remarked.

"That is a 'novice' honey extractor, my yankee friend."

"Will it stand hard work?" I asked.

"Bless your heart, yes," said he.

"How much honey have you been able to sling out in one day with it?"

"Why not any, I told you; because you see these tarnal queens persist in laying in all shapes."

"Allowing me the usual liberties my British cousin, may I ask what that stock of stuff is just piled up there by that fence?"

"Oh, those are a few of last season's 'apiarian supplies.'"

"But are they not going to decay there?"

"I guess so."

"Well, are they not useful?"

"W—e—l—l, y—e—s, I suppose so, some of them."

Approaching nearer, I said, "What are all these things? You know I am only a box-hive man."

"This is a sack to hold queens in, while clipping their legs and wings."

"Their *legs*?" said I.

"Oh, yes, in many cases we cannot prevent swarming, storing of surplus honey and prosperity generally, unless we clip the left hind leg as well as the right wing. Scientific bee-keepers have discovered that nature made a mistake in putting on so many legs on a bee, when the noblest work of God has but two, and elephants and sich only have four, besides you see we must cut off a wing, and then an opposite leg, just balances the bee."

"Well but—"

"No use of your trying to be so contrary, you have got to come inside the 'ring.'"

"Now friend Heddon let me tell you something confidentially, if you ever expect to make money out of our fascinating pursuit, you must write up frame-hives, kettle-feeders, queen-nurseries, and to make a long story short, everything you see in this pile here, and of course the unsuspecting purchasers, must find you using them when they call on you, but then you see, even if these fixtures do get so much in the way that you don't get any honey, the money you will receive for supplies will pay altogether the best, and mind you, don't offer any 'money back,' for now bee-keepers are getting their eyes opened considerably."

"Well my friend, to say nothing of the honesty of the course you propose, I think the day is nearly past, when bee-keepers of this country are to be gulled by trinket-supply venders. He who can furnish a good hive, simple, but embracing all the requisites of success, at a lower price than small apiarists can make them, will find a place among us. Bee-keeping never did, nor never will, pay for $5.00 hives. One who is favorably located, can sell hives at a paying profit, and accomodate the apiarists at the same time."

"But Mr. H., how are we to decide when a hive is a successful one?"

"In this way, a successful honey-producer will not use an unsuccessful hive.—Josh Billings, wisely says, 'a reputation for good-luck needs looking into.' Rothchilds says, 'never have anything to do with an unsuccessful man,' referring to business, of course. The man who cannot succeed as a producer, is not fit, to devise and vend supplies for others." When you come across the line to visit Michigan bee-keepers again, please abstain from the use of our forty-rod whisky, and tell your readers more about the contents of our honey house, than about our hives. JAMES HEDDON.

For the American Bee Journal.

Cyprian and Carniolian Bees.

Having read, in the bee papers of Europe, the favorable reports of a Mr. Cori, on the Cyprian bees, we resolved to get some queens from this Island. In consequence we wrote to our Italian correspondent to send an order for five queens to Mr. Cori, to introduce them in his apiary, and to send them with his queens to us. But Mr. Cori had too many orders to fill and was unable to send the queens. Besides, as we stated our preference for queens coming directly from Cyprus, that they may be of unquestionable purity; and as we had given *carte blanche* (full leave) as to the cost, our correspondent managed to get the address of an Italian gentleman living in Cyprus, and wrote him to send the Cyprian bee colonies.

The purchase of these colonies was very difficult. The bee-keepers there do not like to sell their bees; they think that if bees are sold, the remaining colonies will be dissatisfied and will quit the apiary. Yet, after some delay, five colonies were bought and sent.

When they arrived in Italy, all the combs were smashed and mixed in the broken *earthen* hives. A few workers were alive yet, but no queens. We will try again.

We had ordered, at the same time, some queens from Dalmatia, from Smyrna and from Carniolia. Our Italian correspondent was unable to get any of them, but the Carniolian; that we received in October, with a lot of Italians, three of these Carniolian queens were alive, out of the five sent.

These queens are very dark; as dark as the darkest hybrids. But they are very large.

In Germany the Carniolian bees are greatly appreciated, some think them more prolific than the Italian, and of course giving more honey. We will try them and report.

We have not seen their workers, for these queens were introduced for a few days, in the apiary of our correspondent and were sent accompanied with Italian workers. But if we are to judge of the workers by the look of the queens, they will resemble our hybrid two-banded bees.

As these queens were received for experiment, we have none for sale.

CH. DADANT.

For the American Bee Journal.

Which is It?

MR. EDITOR: R. R. Murphy (see page 250, Oct. number A. B. J.) certainly met with a freak which, had he closely attended, would have been of great value to apiarian science. There are three things which may all have an effect upon the development of the organs of procreation in the young queen, viz., space within which to develop, the nature and quality of her food, and the position in which she is while developing. His workers were reared in drone cells. Now were they more than common workers? If not, then space alone has no influence upon such developments. Were they not probably egg-layers? As one writer to the JOURNAL found 8 or 10 egg-laying workers in one hive, may they not be more common than we generally suppose? May not the position have as much to do with development as space? Is it not the food only which develops, and space and position secondary matters, not essentials?

J. E. R.

For the American Bee Journal.

A Visit to a Neighbor's Apiary.

An account of what we saw by a visit to the apiary of T. S. Bull, 5 miles north of Valparaiso, will, we think, be of interest.

South Liberty Apiary, named from the neighborhood, is not large; it contains but about 140 stocks. But it is not of the extensiveness of the apiaty that we wish to speak, but of the system of its management. Mr. Bull did not commence bee-keeping till 1871, but being a hard student in apiculture, has already won the reputation of a veteran. Study, experiment, and experience, with a natural talent for the calling, have given him a knowledge possessed by few, while his success is established by the effects of his work. As a matter of course, then, Mr. Bull's plans and opinions are valuable.

We first entered, on the occasion of our visit, the workshop. We found this very convenient and well furnished. At present it serves the purpose of store-room also, though Mr. Bull intends building especially for this in a short time. Underneath the shop is a good, well-ventilated cellar with a substantial stone wall. It is supplied with a stove in which, in severest weather, a fire is kept. All the bees are placed in this cellar for the winter, and thus Mr. Bull never loses a stock of bees by cold.

His hive, whenever seen, attracts attention and excites comment. It certainly has few superiors. One feature is the bottom, furnished with hooks and hinges; the advantages of this are apparent to all.

Mr. Bull has partly replaced the black bees with Italians, and will likely complete the change during the next season. He, like others who have tried the Italians, sees their superior merits, and will profit by the knowledge.

M. L. P.

Valparaiso, Ind.

[One of Mr. Bull's hives is on exhibition at this office, and it attracts as much attention as all the others, by its side. It has many good points which may be followed by others, as there is no patent on it.—ED.]

For the American Bee Journal

Surplus Honey.

This subject is one that can hardly be written about too much, especially as it is the only source of profit to the great majority of bee-keepers. Of course there are a few who make a specialty of rearing queens and bees for sale; but to the average bee-keeper this is his only hope of profit. And as comb honey, as a rule, finds the readiest sale, I will give some of my experience in that line.

In the first place, I am one of that number who believe the hive has very much to do with our obtaining the best results. For the past two seasons I have been using a frame 7 inches deep, and it has given far better results than the deep frame I had always used before. And so far as my experience goes it has shown me that the bees choose to store their honey as near the brood as possible. Now this frame is so shallow that there is very little honey between the brood chamber and the surplus boxes in my deep frames, in the fall months (and that is when we get our surplus here), there would be 3 or 4 inches of honey at the top of the frames. Then, too, these shallow frames are so convenient to get out of the hive, you scarcely begin to lift before they are out.

Honey men in New York get large amounts of box honey in deep frames, but they get it in hot weather, in June and July.

And now a few words as to the mode of having our surplus stored. The rack I use to hold the section boxes, is similar to that used by J. P. Moore. For my hives I make them this way: two pieces of ½ inch stuff, 21½ long by 2 in. wide, these are for side pieces. Now get out 4 pieces, 16 in. long by ⅝ in. thick, 2 in. wide, nail through sides into the ends and nail the other two pieces crosswise in the frame at equal distances apart, so there will be three equal open spaces. Now get two pieces hoop iron, 1 in. wide, 21½ in. long; nail them on the underside of ½ inch strip, letting them project in ½ inch. Now, two pieces same kind of iron, 15 in. long, nail on ends projecting in same as sides. For middle cross pieces get hoop iron, 1½ in. wide, 15 in. long, nail on underside, letting them project equally on both sides.

The section boxes are made thus: tops of boxes, 1¼ in. wide, 5½ in. long; sides, 1¾ in. wide, 5 in. long, using stuff ¼ in. thick. Bottom piece ½ in. square, 5½ in. long; nail through sides into top and bottom pieces. The bottom piece is set so that one of the corners are up. Set nine of these together (they should be made exact, so that they will fit) and get 4 pieces thin tin, 1 in. wide, 15 in. long; place them on the sides near top and bottom, and nail through into frames with ⅜ in. tinned tacks; a piece of glass, 5x6 in. is tacked on each end. This makes a box 15¾ in. long, 6 in. wide, by 5 in. deep, and will hold about 15 lbs. The object in using tin at the sides is to make it convenient for the retailer, as he can use a knife to cut the tin, leaving the other frames compact. The rack holds three of these boxes. I make the caps of my hives 12 in. deep, so I can tier them up. The first set of boxes put on may have the tops made tight-fitting, that is 1¾ wide.

Henry Co., Ill. J. V. CALDWELL.

For the American Bee Journal.

My Bees.

Aug. 12, I left the city to remain permanently in the country; glad to get away from piles of brick walls to where I could see my bees every day. I extracted what honey I thought was in the bees' way, made a few swarms and had 1 or 2 natural swarms. The total number of colonies reached an even 100, but I felt some anxiety about some of the last ones, as the queens were slow about commencing to lay. Finally eggs were found in all but two of the hives, and these two I concluded to unite with others, and late in the fall I proceeded to unite them, when I found in one of them eggs and a handsome young queen, and in the other, eggs placed irregularly in the cells, after the manner of a fertile worker. So I concluded to see how they would stand the winter, and the 100 hives were taken into the cellar, commencing Nov. 15, and taking in the last, Nov. 21. They were carried in by the hired man, a part each evening, as the weather was not very cold and they were not quiet enough to be carried in by daylight.

A slight fall of snow came on the 18th, so that the last half were not as dry as I should have liked, but I thought it was safer to hurry them in before the frost had any chance to get into the hives. A hive taken into the cellar with ice or frost in it, is not in the best condition for wintering. The room in the cellar which contains the bees is devoted to their entire use, being separated from the rest of the cellar by lath and plaster walls. A chimney is built from the ground up, and this allows of ventilation to almost any extent. In the very coldest spells, little or no ventilation is given. The cellar has a clay bottom. The hives are placed in piles four deep, but instead of the first hive being placed directly on the ground, two hive-covers are first placed one on the other. An inch strip of pine is placed on top of each hive at the back end, for the double purpose of keeping up the back part of the quilt and the hive that is placed on top.

Possibly less ventilation would be better, but the quilts, or more properly the sheets, are so covered with propolis that to leave them covered down tight would be a good deal like covering with a board. The temparature in the cellar went as low as 33 deg. on Dec. 10, when the outside temperature was 20 deg. below zero. At present writing, Dec. 16, the temperature in cellar is 38 deg., and outside at zero. I hope it will average a good deal higher through the winter.

Commencing the season with 34 hives, I increased to 100, and took about 1,700 ℔s. of honey, mostly extracted. B. LUNDERER.

For the American Bee Journal.

Comb Foundations.

We all know too little about their foundations, but I think I know more than has been reported of them. I have been looking over the JOURNAL and *Gleanings* and find that over half the reports are not entirely satisfactory, the greatest trouble is sagging; the second, the queen objects to them; third the bees do but very little toward thinning the septum of the cell. Novice however contradicts us, saying that they "do thin the bottom of the cells, and that it is not worth debating," that "foundations of pure wax will not sag, etc."

Brother apiarists will you allow one man to decide this, or will you open your eyes? I thihk that no one has reported that the bees thin the septum of foundation as they do that of natural comb. Please examine the septums of cells and see if they are not about as thick, especially at the corners, as before the comb was built. Last June I bought one pound of paraffine foundation of A. I. Root, which was entirely worthless, afterwards I bought one pound of bleached foundation said to be pure bees-wax, but I do not think one-quarter of it was bees-wax, as it did not taste or smell at all like bees-wax. It was very heavy, and I thought at first it was working all right, but it finally broke down with the weight of honey in the brood chamber. I did not ask Novice to refund my money on the two dollar's worth of foundation. On August 19, I sent Novice $54.00 for 100 ℔s. of pure yellow foundations, I trusting him that it was pure and would not sag; when I received it I put in six sheets 11x9 inches deep alternately in different hives, the result was the combs sagged 1¼ inches till they touched the bottom bar, then bulged side-ways; nearly one-half the combs were long shaped drone cells.

As I needed the combs I did not think of anything, just then, but how to save them, so I cut them to fit the frame and then had to wax on three or four sticks up and down, to keep them from sagging and bulging. I cannot think that the foundations were pure as they are much softer than my pure bees-wax, and do not taste or smell just right. I do not think that pure bees-wax will sag much, though I am quite certain I have not tested any pure wax. I think some must have received pure wax foundation or their reports would not have been favorable.

However, I must say that even my foundations will do for comb honey, though there seems to be something objectionable about them to the bees as well as the queens. If the septum of the cells can be made not over twice as thick as natural comb, they will be a success for comb honey. The sheets should not be more than three or four inches wide as comb honey ought not to be more than four inches deep. I have used several lbs. of foundations that I made on plaster moulds for comb honey, and think them much better than none; though if I can buy pure wax foundations that are thin enough for 50cts. per lb., I should buy them, if I want any.

Now I would like to criticise "Novice," in a friendly manner.

I will first explain about the 100 lbs of comb foundation I bought of him. I ordered sheets 18 x 12, (there were only about 18 x 11 to 11½). I expected to cut them all in two and fasten in as per directions, leaving 1½ inch space at bottom, but when I tried several of them in rather cool weather in different hives, and placed alternately between full combs, they sagged 1½ inches till they touched the bottom bar, then bulged side ways; long shaped drone cells was the result.

To keep them from sagging I had to cut the foundation to fit the frame, and then wax on sticks every 3 inches. All this was done to keep the combs from *sagging*, not that it is the proper way to fasten in foundations that will not sag more than a little.

I returned most of the foundations stating that I would not be bothered with the soft things next year, and he replies, "I do not see that the wax in any way differs from other wax, especially as there are different shades indicating from different lots."

Thus evading my assertion that they were softer than pure wax, and using such useless words as if he were talking to a child.

Again I quote, "I would, under no circumstances, think of having the sheets touch the bottom or sides, and why you should insist on a troublesome plan, different from every one else, is more than I can understand, had you cut the sheets in two in the middle and left them a couple inches from the bottom if need be, you certainly would have had no trouble."

I told him why I did not cut the foundation in the middle and yet he says he "cannot understand." "If I am mistaken I shall soon find it out by actual test. If they bulged, you would certainly have had drone comb, and I have not seen a drone cell, in the comb sent me."

A pity he could not see that the comb sent him had been supported by sticks about every 3 inches, so it could not sag, I used that which sagged for comb honey.

Again he says: "I can by no means be responsible for your mistakes. Consider seriously, friend B., whether all these failures mentioned may not be more your fault than of the things themselves.

All the mistake I made was, in not sending the foundations back as soon as I found that they would sag. I do not say that *pure bees-wax* foundation will sag, but I think "novice" "must have been so careless as to get hold of wax adulterated with tallow," or something else.

New Buffalo, Mich. R. S. BECKTELL.

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For the American Bee Journal.

Comb Foundation.

The two samples of comb foundation sent me for experimenting, were placed in surplus boxes, accepted and appropriated by the bees, and the result entirely satisfactory. And, on testing the honey I find nothing unpalatable from the use of the foundation, and therefore recommended it as a good investment for the supply of all surplus boxes, for which you have no good white comb. And to the manufacturers of comb foundation, I would say that a medium thickness is better than a heavier article. For I think it is a mistaken idea, that the bees lengthen, by drawing out, and thus reducing the thickness of the cells, as given them.

Fredonia, N. Y. P. MILLER.

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For the American Bee Journal.

Bee Notes from Kentucky.

DEAR JOURNAL.—The honey yield has been very large here during the past season. I prefer to raise bees rather than honey, as it is less trouble. Bees sell very readily here at a good price. Living in town I can keep but a few colonies at a time. I like the Italians the best; they are good honey gatherers; they work up all bits of comb that may be left about the hive. As to their gentleness, I see no difference between them and the blacks, but in all other points they certainly are superior. I have received by mail twelve or more dollar queens from Dr. D. P. H. Brown, of Augusta, Ga. They all (except two or three of the last ones) proved very satisfactory. The last one was introduced July 20th, and filled the hive full of beautiful yellow bees in sixty days, scarcely a black bee remaining. I received a dollar queen from Andrews & Vaughan, Columbia, Tenn.; it was introduced Sep. 9. The best honey yield this season, was taken by Dr. G. W. Martin; he got 100 lbs. box honey and 500 lbs. extracted, from 4 hives. He made one artificial swarm at the end of the season. The JOURNAL comes regularly and is appreciated. Nearly all the honey gathered was in May, June, and July; the fall flowers were abundant, but failed to give honey.

Mason Co., Ky. WM. W. LYNCH.

For the American Bee Journal.

How I Destroyed Moth-Millers.

The moth-fly or brown miller is our bee-enemy here, and this is how I managed it: The latter part of July, August, and the first part of September, I took dishes containing vinegar and rain water and sweetened it. Set them on the hives at sundown or dusk; took them away at sunrise, and pinched all the millers in the dishes or on the sides of the hive. One morning I killed 19; generally about half a dozen. I killed hundreds of them during the season. As a result, I see now (Oct.) no injury from this enemy, to those that are anything like strong.

I called to see a neighbor, and looked at his bees. I could see the moth-fly or miller on his hives, and worms crawling around. He said he had neglected them; and had lost two stands with the worms. I think they were queenless, and the millers got in and soon used them up. E. PICKUP.

Bureau Co., Ill.

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For the American Bee Journal.

Natural vs. Unscientific Bee Culture.

Having some ideas upon this subject different from any I have seen advocated, I give them to the public, through the JOURNAL.

Effects certainly follow causes in all departments of nature. In bee keeping we see the effects of departure from their natural laws, in this; that where a few bees are kept exclusively in a neighborhood in the old way, not mixed with bees kept in large quantities in movable frame hives, they winter well on their summer stands, without dysentery, or serious loss. But we have seen reports in the last few years, of apiarians starting with a few swarms which have done well for a few years, and after getting a quantity they have almost all died of dysentery and other ailments.

Why? not because of a large quantity in one place, except as they are affected by in-and-in-breeding, and improper ventilation. Not that the honey is different from what it used to be; not because of cold winters, for they have been kept from the first settling of the country, without great loss in wintering until lately: but because of the loss of vitality caused by *unscientific bee culture.* They are "doctored to death," as Langstroth, (for whom I have the greatest respect) says. How "doctored to death?" First, by dividing, or artificial swarming, which, as now practiced, causes the bees to raise a queen from a larvae, thereby making a queen but little better than a worker, which they never do when raising queens for natural swarming, always taking an egg. This I deem the greatest cause of their deterioration.

Second, *in and in breeding.*

Third, want of ventilation in wintering. I will explain my views upon these subjects in future articles.

S. S. BUTLER, M. D.

Santa Clara Co., Cal., Nov. 1st, 1876.

NOTE.—Just received a pamphlet from A. H. Hart, which I find embodies some of the same ideas in regard to queen raising.

S. S. B.

For the American Bee Journal.

Michigan Bee-Keepers' Association.

The ninth annual session of the Michigan Bee-Keepers' Association convened in Kalamazoo, Dec. 20, at 2 p. m.: Pres. Balch in the chair. There was a goodly number of the most noted bee-keepers of the state in attendance, notwithstanding the general complaint of hard times. After the completion of a programme for the afternoon session the regular annual business was taken up. The minutes of the last semi-annual session was approved. The Treasurer being absent his report was deferred until evening. The Secretary's report showed the expenses incurred in procuring papers and circulation notices of the meeting to be $6.30.

THE FIRST TOPIC

was introduced by a short paper read by the Secretary from Mr. Will. M. Kellogg, on "Neatness in Bee-Keeping" recommending order and system in the apiary, which was discussed as follows:

James Heddon—I like the paper because it is practical; but one needs much room to carry out the directions given.

Pres. Balch — Where hives are set in straight rows the queens are liable to be lost.

T. F. Bingham—Has any one present experienced an unusual loss in queens this season?

James Heddon — My house apiary has given me some experience in this direction. Entrances were painted of different colors, but I lost one-fourth of all my queens in fertilization.

Dr. W. B. Southard — Have lost a good many queens, more than usual.

T. D. Ward—My hives stand in a row and are painted of one color. Have lost an unusual amount of queens.

W. B. Southard—My hives were placed in straight, parallel rows also; eight feet apart in the row, and I like the arrangement very much.

Frank Benton—Once kept black bees in hives painted white, set in straight rows, and lost some queens. Related and instance where an old box-hive farmer's "luck" was in proposition to the diversity of the position of the hives. Thought it due to queens being lost when set compactly in straight rows.

THE SECOND SUBJECT

was then brought up by the reading of a paper by H. A. Burch on "Various Matters" containing some observations on the house apiary and artificial comb-foundation. The Secretary also read a paper from Mr. J. P. Moore of Binghamton, N. Y., on "Progress in Bee-keeping," which had a direct bearing on the second topic—"The house apiary and comb-foundation." Mr. Moore criticised some of our modern inventions rather severely, though justly, taking the ground that their adoption was not an indication of true apistical progress. He agreed with the position formerly taken by some of the members of our own Association. We give the discussion of the subject as follows:

James Heddon—I only disagree with Mr. Moore on mixing apiculture with other business. In all my "craziness" I never proposed to use box-hives unless I could sell my present fixtures. Opening hives and handling bees is not essential to success. In some cases I have had to manipulate movable frames, but could have performed the same operations with box-hives in less time.

Pres. Balch—How could you do it quicker?

James Hedden—By turning the hive over.

Frank Benton—I can find a dozen queens quicker in movable frames than I can "drum" out one stock.

James Heddon—My sin has been in going too fast. Now I go faster than ever. I haven't much use for honey-slingers, movable-frames, queen-nurseries, nor the thousand-and-one other useless fixtures, so commonly considered requisite.

T. F. Bingham—Would it not be better to say—"d—n it"?

James Heddon—Perhaps it would; though some fixtures are of value.

Pres. Balch—How much extracted honey have you produced this season?

James Heddon—More than of comb. Is that satisfactory?

Pres. Balch—Yes; but why not produce comb-honey?

James Heddon—Because I am not fixed for it—not from choice. Could I have sold out my entire establishment, I would have started a black-bee apiary in box-hives, and raise comb-honey exclusively. Last spring I started a new apiary six miles from home, and there I have raised comb-honey; and I had no use whatever for an extractor. In my home apiary, everything is adapted to the production of extracted honey, and I can't change in a day.

T.F.Bingham—A good machanic with poor tools, will do a good job; but a poor mechanic with the best of tools cannot do it. The rapidity with which the specialist manipulates hives is surprising to many. In Heddon's "bee-garden," or in Bingham's "ranch" fifty or a hundred hives are manipulated in a single day. This convention has, like some of the bee-journals, done somethings which it ought to be ashamed of. By crying down patents, we discourage invention and progress. What we need is to invite competition. Bring in your inventions and implements and compare notes. Mr. Heddon can manage his box-hive, but it isn't the common box-hive seen sitting around the country.

James Heddon — My box-hive contains bars at the top, but yet it is more of a box-hive than Mr. Bingham's, which Novice styles a box-hive. With the bars, I get straight combs, and by cutting combs at each end can remove any comb, if necessary, which will be very rare.

Dr. W. B. Southard—Would like to inquire about handling bees in the house apiary.

James Heddon—Where it becomes necessary to open a hive and string it around, there is some difficulty. Bees handle nicely, so far as stings are concerned.

Secretary—Have your bees been unusually cross the past season?

James Heddon—I think they have been.

Pres. Balch—How do you remove combs from the box-hive?

James Heddon—Turn it over, cut the attachment to the hive, and take it out.

Dr. W. B. Southard—What advantage has the box-hive?

James Heddon—It is cheaper, can hive a swarm quicker, and perform any operation necessary in less time.

Dr. W. B. Southard — My hive complete

costs a dollar. I can take out a comb that is movable, much easier and quicker than I can turn the box-hive over.

C. I. Balch—For farmers who winter out of doors, the box-hive is probably preferable, but for others who make it a specialty, the case is different.

James Heddon—The Germans who lead the world in many of the sciences, use bar hives, and I can understand it now, though I could not formerly.

Frank Benton—A perusal of the German bee journals convinces me, that the German methods of manipulation are too clumsy. The Germans are good theorists. but it takes a Yankee for practical work.

A. C. Balch—In cutting combs honey will run and set bees to robbing. Why not use a movable frame? Bees will not build straight comb: in the box bar-hive. Brother Heddon preaches one thing and practices another, I fear.

James Heddon—I worked 48 of these same hives one season with excellent success. Would do it again, could I sell my movable combs. I never had such straight combs as in these same bar-hives.

T. F. Bingham—Its no trick to use a box-hive. Friend Heddon can do it without a doubt. I want to say a word about queens. A mother of a family is of prime importance to that family, whether the children live 90 days or 90 years. Mr. Heddon's loss of twenty-five per cent was a heavy one. My loss has been heavy also. Is such the general experience of those present?

Secretary—Last season my loss was some 20 per cent., all yellow bees, on summer stands; hives placed promiscuously. This season have lost 4 per cent. in the house apiary. Think it greater in a poor season.

C.I.Balch—Mr. Bingham's loss is probably caused by taking his bees South and having them "bull-dozed."

T. F. Bingham—There are insects that prey upon bees and there may be a worse difficulty confronting us than the "bee-malady" or loss in wintering. A loss of 25 per cent. is unusual,and seriously interferes with our surplus honey. We can buy queens as friend Heddon did, but it comes too late for the season's work.

James Heddon—In my home apiary my loss was small. In establishing a new apiary I found I could not do everything, and to procure skilled labor is impossible. I do what pays best.

Pres. Balch—I think the loss is caused by their returning to the wrong hives, and being destroyed by the bees.

H. A. Knapp—I think it is caused by insects, which have been uncommonly numerous the past season.

T. F. Bingham—This has been a personal year. We have had a personal political campaign, and the insects may have "followed suit."

C. I. Balch—Birds destroy many bees for the honey, and may kill some queens.

Pres. A. C. Balch—The worst bird on bees is a wartz-toad. A single one will keep a colony depopulated.

James Heddon—He flies low and lights high.

T. F. Bingham—I have been interested in the bird discussion. Heretofore we have rather opposed farmer's keeping bees, as they might trip up our market for honey, but now would recommend *all* farmers to keep bees for birds and let *us* raise honey.

Dr. Southard—Have seen old birds catch and carry drones to their young.

Dr. Southard—How far will bees go for honey?

H. A. Knapp—Mine have been traced 4½ miles, the past season. They will hybridize 5 miles apart.

Pres. Balch—How long does it take them to make the journey?

H. A. Knapp—Some little time, as they fly slowly when loaded. It takes a bee five minutes to load up, unless the honey is reduced.

Frank Benton—So much desultory discussion impairs the value of our proceedings, and no creditable report can be made from it. Let us stick to one subject until it is exhausted.

Secretary—I think that any one who ever attempted to report the proceedings of any body, can appreciate the force of Mr. Benton's suggestion. Adjourned to 7½ P. M.

EVENING SESSION.

The Convention was called to order at 8 o'clock. Pres. Balch in the chair. The first topic of the evening—"Surplus Honey"—was introduced by a paper from Rev. A. Salisbury, Camargo, Ill., who laid much stress on a shallow frame for box or comb honey. The discussion was opened by

T. F. Bingham—History repeats itself. Some years ago a hive with a shallow frame was exhibited, here and was the laughing stock of those present. Now the shallow frame is heard of all over the country. Mr. Root says Bingham has a bad record—has lost lots of bees in winter—and advises people to go slow. Well, I don't know much about the shallow frames, but think they are preferable for all purposes.

Julius Tomlinson—Does shading hives prevent swarming?

Dr. A. S. Haskins—Can see no difference.

Dr. Southard—My bees that were shaded did not swarm nearly as much as others.

H. A. Knapp—The sun prevents rapid work in surplus honey boxes.

James Heddon—Have some colonies at home well shaded with apple trees; they swarm the same as those in the sun, but do not store as much honey. In my house apiary, where the bees are shaded and cool, they swarm as badly as those left in the sun. Have had as much honey stored by swarms in deep hives as in those that contained shallow combs. Saw no difference in wintering.

Dr. Haskins—Did your bees in the house apiary store more honey than those out?

James Heddon—There has been no appreciable difference during the past season.

C. I. Balch—Related an instance of a very large hive—6,000 cubic inches—yielding large amounts of surplus honey, while small hives gave but little. The large hives never failed.

James Heddon—When a man never fails, I think him a humbug.

Dr. Haskins—I had a "bee-palace" that never failed to give honey.

T. F. Bingham—We all read the papers—they are a good thing. When a shower of honey occurs in any section of country, then we get a report from those people, who can tell us how to get a big crop of honey. This year Michigan is dumb as a coffin nail. We can all tell just how to get honey when it rains honey.

Pres. Balch—Don't bees swarm more in a poor honey season?

T. F. Bingham—Yes, on the principle that "there's mischief for idle hands to do." When bees have nothing to do—no honey to gather—they breed rapidly and swarm.

C. I. Balch—Will not heat induce bees to swarm?

T. F. Bingham—I am not aware of it. There's no reason about bees. You can't make bees work as you tell them to; but they will follow out their instinct, which is much nearer right than man's reason.

Julius Tomlinson—Does a moderate increase of stock diminish the amount of surplus honey?

T. F. Bingham—New stocks will produce the most and best comb and honey. They are in the best possible condition for it.

Pres. Balch—Can get more honey from an apiary that is allowed to swarm.

James Heddon—So can I with small hives, but not with large ones.

T. F. Bingham—Will Mr. Benton state what effect the extreme heat of the South has upon honey secretion?

Frank Benton—Tennessee is not a good honey section. With prolific queens we got a good amount of honey in the fall.

T. F. Bingham—I always get the most honey when the nights are cool and the days are not too hot. The best honey localities in our country are where the nights are short and cool.

Frank Benton—The mountainous regions of the South are the best honey-producing localities of that section.

T. F. Bingham—We never had so warm a season as the past, and never had such an abominable poor honey season.

Secretary—How about Cuba and the islands south of Europe?

T. F. Bingham—The nights are cool, and they also have a vegetation peculiar to the latitude.

James Heddon—I got honey from white clover this season for the first time. Will acknowledge that my previous opinion was erroneous.

H. A. Knapp—Buckwheat secreted with me this year, was a failure last year.

Dr. Southard—Sowed buckwheat early for bees, but got no honey. Some sowed later gave a very little. Think my bees gathered honey this season from corn. When bees lay out from heat, raise the hive at the bottom.

T. F. Bingham—Top ventilation does no good in the summer. Ventilate at the bottom.

Secretary—When bees lay out heavily, does it interfere with surplus honey?

T. F. Bingham—Don't think it does. They do it because they have nothing to do. The reason why Dr. Southard's bees didn't hang out was because there was honey in the fields to be gathered.

Secretary—My bees in the house apiaries would cluster over the whole sides of the building, yet they were the ones that stored the honey.

Frank Benton—Mr. Muth's bees are placed upon the top of a building where they were very warm, but they do not swarm.

T. F. Bingham—Bees do not swarm on the last end of a flow of honey. They can scent danger from afar.

H. A. Knapp—I had a swarm come out on September 14, that never gathered a pound of honey.

C. I. Balch—Have had swarms forced out by the heat in September by the quantity.

Dr. Southard—Has any one present used a "lamp nursery?"

Secretary—Have one, but haven't fired it up. Have introduced young queens just hatched with perfect success. Have even superseded queens in box hives by simply letting a just-hatched queen run in at the entrance.

T. F. Bingham—This will work with black bees, but very seldom with Italians.

Mr. T. F. Bingham then read a paper on "Apicultural Progress," being a review of bee-culture for the past thirty years, which called out some discussion of a general character. The subject of "Humbugs" brought out many severe criticisms on Mr. A. J. Root's method of doing business, from those present, it being claimed that he had misled more people and had been the cause of more failures than any other person in America.

Adjourned until to-morrow, at 9½ A. M.

DECEMBER 21, 1876.

Convention called to order at 9.30 a. m. President Balch in the chair. The Secretary stated that he had just received a paper from Mr. J. L. Davis,—Delhi, Mich, on "Surplus Honey," which was read. He advocated the system of using section frames for comb honey, instead of boxes.

Prof. A. J. Cook.—It seems to me that frames for surplus honey should be talked up more, and boxes less. I can get bees to commence sooner in frames and they sell more readily in the Lansing market.

James Heddor—The objection to frames is that the bees do not build the combs true in them; and in selling them you will break the comb and have a sticky article to handle.

Julius Tomlinson—Agreed with Mr. Heddon's views.

Dr. Southard—During the past season, have tried both boxes and frames, and give the decided preference to the former. They sell better, and can get as much honey as in frames. The bees accept the boxes readily and fill them rapidly.

Prof. A. J. Cook—What was your amount of surplus?

Dr. Southard—Fifteen hundred pounds, from 19 strong and 25 weak ones.

James Heddon—I can perform the same amount of work with boxes in one day, that requires five days with frames.

Prof. Cook—Mr. Davis has a large amount of honey in the Lansing market in small frames; they don't leak; they look beautiful and sell readily. Comb-foundation is a success with me.

James Heddon—This question of box-honey interests me, as it bears directly upon dollars and cents. Have used wooden guides during the past season in the boxes, and they work so well that I shall discard guide-combs. Can get truer combs with less work.

Julius Tomlinson—Would it not be better to wax the wooden guides?

James Heddon—Can see no benefit.

Prof. Cook—We are on dangerous ground, I think. What our most experienced bee-keepers can do, cannot be done by us all. Some people can do what others cannot.

Julius Tomlinson—Cut a saw-kerf in the ends of boxes, and they can be taken apart and the combs sold separately.

C. I. Balch—I will wager with any one that boxes with guide-combs will give fifty per cent more honey than boxes without.

Dr. Haskins—My experience with guide-combs has developed nothing in their favor.

Frank Benton—Have tried both methods and prefer the guide-combs to the wooden guide.

Dr. Southard—Have found it difficult to get straight combs in section frames; the queen is more liable to occupy them ; and could scarcely sell them at all. Box honey sells readily.

Julius Tomlinson—People want a choice article and are willing to pay for it. Box honey secures this.

James Heddon—If I had an abundance of empty comb, I would use it ; but not, if I must have the bees build it specially for the purpose.

Prof. Cook—I move that it be the sense of this meeting that wooden guides are as efficient in securing straight combs, as guides of honey comb. The vote was lost by two majority.

James Heddon—I move that it be the sense of this meeting that it is not profitable to raise comb expressly for guides to be used in surplus boxes. The motion was carried by two majority.

Prof. Cook—I would move that all white drone-comb should be used as guides in surplus boxes. Carried unanimously. Also, that as much honey can be produced in small boxes as in sectional frames. Carried by one majority.

James Heddon—A choice piece of comb nicely tapered, for a guide will induce bees to commence sooner; but a flat, ragged piece will often delay them three or four days. In such cases the wooden guide is preferable.

Prof. Cook then read an able paper on "Mistakes of Bee-Keepers, which received the closest attention. He also read a paper on the methods of preparing bees for winter at the Agricultural College, detailing the various experiments made there to ascertain the cause of our losses in winter.

Julius Tomlinson—Have had experience in burying bees in Wisconsin—succeeded well.

James Heddon—We have decided that bees will swarm, and when they all winter, then we shall have bees on every acre of land in the country.

Prof. Cook—Just what I want to see.

James Heddon—But probably never will.

T. F. Bingham—According to the general laws of fertilization, Prof. Cook's bees that are manured the most heavily, will yield the largest crops.

Frank Benton read a paper on "Bee-Culture in the South." The advantages and disadvantages of the "Sunny South," were canvassed with the conclusion that with the single exception of wintering, the Northern latitudes were far preferable for bee-culture. The question to be decided is, will it pay to ship bees South in the fall and return them in the Spring, in order to insure safe wintering?

Shipping bees South for the purpose of wintering is expensive. A year ago, it cost $300.00 to ship 160 colonies. This year a little less. Personal expenses must be added. Secured but little honey in fall, and when returned home in the Spring had to feed. There is also danger in shipping. It is a many sided question and needs further experience to settle its practicability.

Frank Benton—With an empty space above the frames, and an abundance of ventilation, there need be no loss in moving.

The election of officers was then taken up with the following result: President—Prof. A. J. Cook, Lansing, Mich. Vice-President—Dr. W. B. Southard, Kalamazoo, Mich. Secretary—H. A. Burch, South Haven, Mich. Treasurer—James Heddon, Dowagiac, Mich.

Mr. Tomlinson's resolution was adopted, extending the warmest thanks of this Association to the people of Kalamazoo for the courtesy and hospitable treatment received at their hands; also to those who had furnished papers for this session.

The Secretary moved that we elect as honorary members all who had sent us papers, that are not already members of the Association. Carried. After the transaction of some routine business, the Convention adjourned to meet in Lansing, at the call of the Secretary.

HERBERT A. BURCH, *Sec'y.*

Neatness in Bee Keeping.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

Neatness in all things is to be commended. In all the walks of life, neatness gives a charm to everything we do. How much nicer a person appears who is always neat in his personal affairs, and how much more we can enjoy their society, than one who is a sloven in all he does! I do not mean to be always "dressed up;" dandyism and fopishness are not neatness, by any means. A man may be very finely dressed and make a good appearance, and yet be a sloven in his private affairs. He is neat only to "show off." This neatness we should extend to all we do in bee-keeping, neat in our persons, so that in case we have visitors, as we all do, when we are working with our bees, handling combs, extracting honey, etc., they may not go away with the feeling that they do not want any of our honey, because we are so careless in regard to clean hands, clean tools, etc. We must guard our reputation as the cream of success. Nearly all of us can get the honey, but not every one can sell it readily in these days of so many adulterations. Neatness is *one* point in getting and keeping a good reputation; honey neatly put up in bottles, jars, boxes, or frames, sells very much better, than the carelessly put up honey, while an article neatly and tastefully labeled adds much to its attractiveness, while all combined adds the value to our pockets. We must see to it that our extractors, tools, frames and boxes, are kept and used in clean places.

Then in regard to our hives and yards. It is but a few moment's more work to set a hive in perfect line with its fellows, and then how much more pleasant to look at. To a person with a true eye to the beauty of uniformity, it is a real annoyance to see hives looking like a hastily thrown together rail fence, facing all points of the compass in the same row, even if there has been an attempt to make a row of them; some hives tipping to the front, the next back, others endwise, this way and that, making the yard look as though the bee-keeper(?) had sailed over his yard in a balloon, sown his hives broadcast, and then tried to rake them into straight rows with the anchor. Put the hives in straight rows, even if the rows face different ways, and tip them all a little to the front to carry off water from the entrance and to keep rain from beating in. Keep your yard clean, free from high weeds and grass, which are a sad bother to the bees, and when dry a danger, from fire.

How few Apiaries do we go into where we find the hives free and clean in this respect. I have been into yards where the poor bees had to alight on the top of the hives and crawl down the front to the entrance, the grass being so thick that they could get in no other way.

Grass and weeds are fine hiding places for mice, insects, toads, etc., where they can come forth to work on the bees and their proceeds. It also makes damp hives, moldy combs, and diseased bees.

We have our hives on legs, seven inches high, with an alighting board reaching from the ground to the entrance. Our chickens roam at will around and under the hives and woe to the bug, miller or mouse, who dares come into their domain, for their sharp eyes detect every one.

All the hives should have one good coat of paint at least once a year, which can be done on cool days when the bees do not fly, without changing the bees over to do it, and it adds to the neatness of the yard, besides preserving from the effects of the weather.

Then brother bee-keepers, let us all be neat in bee-keeping as one of the effects to bring the science up to the standard it should occupy. Will. M. Kellogg.

Bee Notes from Iowa.

We are located in the s. w. corner of Iowa, bounded on the west by the Big Muddy, (Mo. River), with a loose soil from 100 to 200 feet deep, so says our geologist. I have never been down that far, but have spaded 80 feet, and found it correct. Alsike and white clover do not do well here; the soil is too loose and open, in my opinion. We have two rivers running through the county, from the valley of these our bees gather considerable honey in the fall. The county is mostly prairie and newly settled, consequently not blessed with as many blooming orchards as some other sections of the county. There is considerable of basswood in the groves that yields honey some seasons. I am two miles from the nearest basswood timber, and within a radius of three miles there are more stocks of bees than there are linn trees, still my stocks gathered about 30 lbs. per colony the past season. There were several thousand pounds of honey raised this year in this county; all consumed near home, I believe. I find a good many prejudiced against extracted honey; the fact is, they believe that if it is not in the comb it is adulterated. A short time since I asked a lady to buy some extracted honey, when she informed me that she had a receipt for making honey. But whenever I get a customer to use extracted honey one season, I then have him cured of his prejudice. I have never shipped any honey. I had no success this season with box-honey; our fall honey, this season, is of superior quality, very thick and candied already. We have, what we call 'The Fremont Co. Bee Keepers' Association,' and because you do not see our proceedings in print you must not consider that we do or say nothing; the fact is we "keep our light under a bushel." Ed. Wellington.

Fremont Co., Iowa, Nov. 2, 1876.

American Bee Journal.

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Please write names and post-office address very plain. Very often men forget to give their post-office, and quite often a man dates his letter from the place where he lives, when the paper is to be sent to some other office.

Barlow & Churchwell, have sent us a postal card on business, but failing to give their address, we must wait for that essential element before we can attend to it. Will they please write again, and state their Post-Office, County and State, and it shall receive attention.

☞ Winter is the time to "read up" on bee-culture, and all who expect to be successful should spend the time to profit, by studying the subject to the best of their ability.

☞ Those who wish Demorests' Monthly Magazine with the American Bee Journal for 1877 can get both for the small sum of $4.00 ; thereby saving one dollar.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ The proceedings of the Ky. B. K. Association was duly received from the Secretary, but by an oversight was put into a pigeon-hole and overlooked till this issue was too full to admit them. Will appear in next number.

☞ We employ no traveling agents, depending entirely upon local club agents and our volunteer friends generally, to keep up our circulation.

☞ Any of our subscribers who wish to present a copy of the American Bee Journal to a friend for the year 1877, can do so by sending us one dollar and the name and address.

☞ Read our list of Premiums for getting up clubs. We have extended the time to January 31, 1877—in order to encourage agents to work for the best premiums.

☞ The Ohio and Texas Land Co. turns out to be a "swindle;" at least so says the P. M. at Mineral City, Texas. The adv't. was sent us by a advertising agent in Cincinnati, and we supposed it all right or would not have published it.

We do our readers a favor by directing their attention to that most valuable practical journal, the *American Agriculturist*, which is just now entering upon its 36th year. It is packed full of useful information, that cannot fail to be very helpful to every family, and to every man whatever his calling, and whether residing in City, Village or Country. We supply it and The American Bee Journal for 1877 for $3.15.

Our Premiums for Clubs.

A. G. Hill has sent us one of his Gas Pipe Extractors to be presented to the person sending in the largest club of new subscribers to The American Bee Journal before January 31, 1877. The Extractor is light and extremely simple. We will pay the express charges, so that it shall be "without charge" to the recipient.

D. A. Pike will present one of his beautiful Albino Queens—whose progeny will be one-half Italians and one-half Albinos—to the getter up of the *second* largest club of subscribers. The Albino will be sent, post-paid, May 1, 1877.

We will add the following:

For the *third* largest list, we will send a tested Italian queen in May, 1877.

For the *fourth* largest list, we will send 500 young tulip trees (4 to 8 inches high) in April or May, 1877.

For the *fifth* largest list, we will give a copy of The American Bee Journal for 1877, post-paid.

For the *sixth* largest list we will send, post-paid, a copy of Vol. I. of The American Bee Journal, bound.

See our club rates on page 35 of this issue. Names and money can be sent in as received, mentioning that you wish to compete for the prizes, and we will open an account accordingly. Work should be commenced *at once*.

Three Numbers Free!

By an arrangement with the manufacturers of the Abbott Pocket Microscope we are able to make the following remarkable offer to new subscribers:

To give those who are unacquainted with the merits of our paper an opportunity to try it before becoming regular subscribers, we propose to send three numbers of The American Bee Journal "on trial" and The Abbott Pocket Microscope, description of which will be found in our advertising columns, for $1.50, the price of the Microscope alone, and thus get the Journal for three months practically free. The Microscope alluded to is the most complete thing of the kind we ever saw, and can be made valuable in many ways, besides being a constant source of amusement and instruction. Send in your orders.

We will present 100 tulip trees to any person sending one or more new subscribers for 1877. See Club Rates on page 35. The trees will be from 4 to 8 inches high, and will be sent in November or May, as desired. Those desiring these trees must mention them when sending in subscriptions.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

Vol. XIII. Chicago, Illinois, February, 1877. No. 2.

Honey Producers and their Interests.

The American Bee Journal, ever on the alert to advance the interests of honey-producers, would inquire, Why they should not combine for mutual protection and the enlargement of their business?

The many letters in this and other issues of the Journal from those of the smaller producers who have sold large quantities of honey in their home markets, prove that local demands may be largely increased—that a trade for the "concentrated sweetness," sealed up in the honey-comb, can be developed in almost every village and hamlet all over the broad acres of this land—east, west, north and south! Local meetings of the bee-keepers in each township or county would greatly assist in this matter, by bringing the subject under discussion—and by the adoption of a systematic plan of action.

The larger apiaries, with their increased yields of nectar, demand *larger* and *wider* fields of operation. Why should not the proprietors of these form combinations similar to the California organization, that we briefly alluded to in the October number of the Bee Journal for last year, on page 252? Such associations should take special interest in the packing, shipping and sale of honey from designated Districts or States. This would greatly assist bee-keepers and protect their interests generally.

The many very interesting essays read before the Michigan Bee-Keepers' Convention, which we present to our readers in this issue, proves that there is talent enough in the line of theory, and experience enough in the line of wintering, springing, how to produce the best-selling honey, and plenty of it. Now why should not all this knowledge and experience be turned to sound business account? Why not make it tell in the line of a combination to dispose of the surplus after supplying the home markets?

The San Diego Bee-Keepers' Association received honey from their members, repacked, assorted and *graded* it, ready for shipment. They then sent their agent, Mr. C. J. Fox, to the Eastern and Southern cities to receive orders for it by the car load. He contracted about a dozen car loads and returned home as the Association, we are told, had no more to sell! "Now, if they have done these things in the green tree, what may they not do in the dry?" To take off the figure: If, with the thousands of intervening miles between California and the great commercial centres of the East and South, they have been able to sell honey in such large quantities and at good figures, why may not the apiarists of the Eastern, Western, Southern and Middle States, almost within "hailing distance" of the great centres of commerce—nay more, having these very marts of commerce in their midst—organize such associations and sell thousands of tons of honey annually, that now run to waste, for the lack of bees to gather, apiarists to husband, and wide-awake organizations to handle it? Their magic hand could turn it into gold to scatter among the apiarists, by which they may bless their families with food and raiment, necessaries and luxuries, that would gladden their hearts and decorate their homes!

Again we ask: Why not organize?

The Season of 1876-7.

The universal verdict is that the present season has been one of the most rigorous within the memory of that venerable personage—the oldest inhabitant! From the Atlantic to the Rocky Mountains—from the Canadas to the Gulf—all over this vast country Jack Frost has waved his ice-bound sceptre, and held every living thing beneath his unyielding grasp! For nearly two months has his sway been undisputed by Old Sol's rays of light and heat—but it is consoling to know that ere many days the spell will be broken, and Earth will again be decked in her beautious garb of verdure, and lovely flowers will bloom, inviting the bees to their daily labor with busy hum! But just at present the world at large presents a varied picture.

A letter from the Pacific Slope, received just as we were going to press with this issue, states that "the sun is shining gloriously, and all the earth is clad in her garments of lovliness, but we want rain."

One from Georgia says, "it is raining, raining, raining, so I'll sit down and write you"—and he wrote us a long letter.

One from Louisiana remarks that "Northerners need'nt think that they have all the *cold* weather. It is cold enough here now to suit any one."

One from Texas says that "with snow 16 inches deep and the severe cold weather of this winter, we hardly know what to expect next—never heard of such a winter here before."

Here is another, *really* representing the condition of all the Northern States. It is from friend Kepler, of Henry Co., O. He says: "Bees are not wintering well out-of-doors,but in the cellars they are all right, so far."

One from England says, "December was mild, and bees were active nearly all the time, but as it rained almost continually, there was no forage and breeding ceased. The holidays were greeted with a slight snow, but, as usual, it lasted only a few days; since then the weather has been fine."

One from Austria tells of the general mildness of the season there, and remarks that "bees are doing well."

From Australia comes the news o'er ocean's main, that during December there have been heavy fogs and mild weather. "Bees are generally in good condition, and a good harvest is confidently expected."

◆

☞ Our thanks are due to the editors of our exchanges and to the multitudes of our subscribers that have so flatteringly eulogized THE AMERICAN BEE JOURNAL in its new dress for 1877. We hope all who can will get *at least one* more of their friends to subscribe for the BEE JOURNAL for the coming year, and thus not only be doing a kindly act to the subscriber, but also augmenting the long roll of worthies who form its regular readers and supporters. The universal verdict is that almost any one number of THE AMERICAN BEE JOURNAL is worth more than the price of the year's subscription, to the scientific bee-keeper.

◆

☞ Friend W. F. Clarke has been detained in Canada longer than he expected, and up to the time of our going to press, he cannot say how soon he will be in this city. We hope in the next issue to be able to say that he is here, and to give his programme in detail for future operations.

Bee Items from Louisiana.

The New Orleans (La.) *State Register*, of Jan. 21st, remarks as follows, about bee-men and "things" in Louisiana:

Dr. Rush, formerly of Point Coupee, and one of the best bee-keepers in the South, has located his entire apiary on the plantation of Major A. W. Rountree, opposite the Carrollton Ferry. He has 100 colonies.

Messrs. Perrine & Grabbe have started into business by putting up a saw mill and cutting out material for 1,000 hives. They have purchased about 150 colonies of black bees, and brought 100 colonies of Italians with them from Chicago. They are located on St. Charles Avenue, in the Seventh District.

Our friend Alex. McConnell, 196 Clio St., who is the father of the bee business in this State, has put his apiary in first-class order, and starts out with 100 colonies of pure Italians.

Last, and least, the editor modestly mentions that he has some bees that he will be glad to show any of his friends who are in any way interested in the honey business, if they will call at his residence on Carrollton Ave.

This State in its honey-producing capacity is superior to California. This fact is becoming recognized and we anticipate this spring some considerable interest in the bee business.

◆

☞ We have had a beautiful Poster engraved, and printed in two colors, for THE AMERICAN BEE JOURNAL, which we should be glad to send to such of our friends who will take the trouble to post them up in some public place: say post-office, R. R. depot or hotel, where they can be seen.

◆

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything that may be required about the apiary.

◆

☞ Thus speaks the *Rural Sun*, of Nashville, Tenn., concerning friend Andrews, the newly-elected president of the National Society:

"We point to W. J. Andrews, Esq., of Columbia, as one of the growing men of Tennessee, possessing systematic business habits, indomitable energy, with an investigating turn of mind, and tact and talent to win success in any chosen enterprise. By application and research he has awakened a deep interest in bee-culture, which is exerting a beneficial influence throughout this State. At the late Philadelphia meeting of the National Bee-Keepers' Society Mr. Andrews was chosen, by an unanimous vote, the president of the Association, an honor wholly unexpected, but most worthily bestowed, and we congratulate him and the Society upon his selection as its chief officer."

Notes & Queries.

Winnebago Co., Ill., Dec. 22, 1876.—"My bees did well. I had 20 stands last spring; increased to 40; got 1,300 lbs. of honey in 4-lb. boxes, and 300 lbs. of extracted. I would like to know how Mr. Harbison, and others, get their comb built true in those small frames. Please tell us through the BEE JOURNAL? W. H. CONKLIN.

[Starters of empty comb or foundation will secure straight combs. A piece of empty comb may be used, of sufficient size, to fill the small frame, or a strip of only half an inch in depth may be used.—ED.]

Broome Co., N. Y., Jan. 1, 1877.—"Will some one that has used frames closer than 1½ in. from centre to centre report their experience? It seems to me that frames should be closer than 1½ in. from centre to centre. If placed 2 in. from centre to centre, they will lengthen out the cells so that the space between the sealed honey is no more than when put closer, and is built more uneven than when put farther apart. I use the Langstroth frame, and put 8 in 12 inches. I hang the outside ones ¼ in. from side of hive, the others ½ in. between, making 1½ in. from centre to centre. The bees make the comb in outside frame as straight as a board, and will make the frames full, only leaving ¼ in. between outside of comb and side of hive. Why should they require double that space between the other combs? Close the space up to about ¼ or ⅜ inch, and they will leave that much space if frames are put ⅜ in. apart. I may be wrong in my conclusions. How would 1 and 5-12 in. from centre to centre of frames do? What is the best method for keeping frames foom swinging, and at a proper distance apart at the bottom?" J. F. PELHAM.

[Bees do not usually raise brood on the outside cells of the outside comb. This allows them to lengthen the cells, leaving barely room to pass between the comb and the side of the hive. If combs are built perfectly straight, less than 1 5-12 in. from centre to centre will be all right. Usually, however, there are inequalities which make it desirable to have them nearly or quite 1½ in. from centre to centre.

Nails, small staples and various other devices have been used to hold frames the proper distance apart at the bottom, but probably nothing is better than to have the frames true and hang in the ordinary way on a rabbet, with nothing but their own weight to make them hang true.—ED.]

Dearborn Co., Ind., Dec. 27, 1876.—"The A. B. J. is a welcome visitor. Some around here think they 'know it all," and that journals are of no use to them, but I could not consent to keep bees without the BEE JOURNAL. I have the Langstroth hive with 9 frames. Is there any better hive than that? I wish to Italianize in the spring, but my neighbors have hybrids; would there not be some trouble in doing it?" S. HUMFIELD, JR.

[The Langstroth is a good hive; we know of none better; a few modifications are introduced by some who use it, to suit their own notions, but does not change it from being a Langstroth hive.

The best way to Italianize is to get a purely fertilized queen and introduce her to a strong colony.—ED.]

Two queens from Mr. Nellis arrived safely in cold weather. I removed the black queen and introduced the Italian in a cage, and let her out the next day, there being no brood in the hive. I did not think there would be danger of her being killed. They went to killing one another in the following night. I am sure no strange bees entered the hive. I examined the dead bees, but found no queen. Please explain. R. C. CAMERON.

[We never knew of bees of the same colony fighting each other. In a starving colony the old bees sometimes fight the young ones, to get their honey. Then the young ones crawl out, their abdomen curved, in a dying condition, like bees that have been stung; but such cannot be the case with friend Cameron's bees. Robbers may have entered while he was looking for the black queen, and the cold might have prevented them from returning to their hives. The loss of the queen, and finding no brood to replace her, may have so far troubled the bees that they did not notice the robbers; but as soon as they discovered the caged queen, and quiet was restored, the bees may have destroyed all the intruders. Can any one suggest another explanation? —CH. DADANT.]

Broome Co., N. Y., Jan. 10, 1877.—"I like the BEE JOURNAL very much, and hope you will be able to make as good a volume this year as you did last year. I wish it much success." DR. F. LASHIER.

["Excelsior" being our motto, we expect to have each years' numbers excel those of the previous year. It is very encouraging to the publisher to know that THE AMERICAN BEE JOURNAL is so much appreciated and so welcome to the thousands of its readers, as testified by multitudes of letters received within the past few weeks. It shall be our constant aim to excel, to advocate the interests of bee-keepers everywhere, as well as to give the most scientific and practical articles, on every branch of bee-keeping, by the most successful apiarists of the world.—ED.]

Jan. 16, 1877.—"Some say there is no money in the bee business; others think they can get rich quickly in it. Some like extractors; others do not. The fact is, any one who goes into a business should first *learn* it, then they will *know* for themselves what is or is not best, or calculated to pay." C. Follett.

[Of course it must be learned like any other business; though all are not adapted to the care of bees, neither can every person make a good musician, carpenter or printer. —Ed.]

Chatauqua Co., N. Y.—"Foul brood has made its appearance in this section. Is there any remedy for it?" A. Tefft.

[Salicylic acid has been used successfully as a remedy for foul brood. See article on pages 17 and 151 of A. B. J. for 1876. You will there find all the information you desire.—Ed.]

Miami Co., Ind., Dec. 15, 1876.—"As I was standing by one of my hives, the last of October, I observed the queen on the top of the hive. I caught her in my hand and she flew away, returning again in a few minutes. It is often asserted that the queen never leaves the hive; how then do you account for this?" F. M. Moody.

[It may have been a *young* queen, which always leaves the hive at least once before laying; or it may have been a queen from another hive.—Ed.]

Pike Co., Ill., Jan. 11, 1877.—"We have no fall pasturage for bees in this section, except cultivated crops. I have 25 stands and want to sow melilot clover for them in the spring. How many acres would be required for them, and how many pounds of seed will it take to the acre? Please give particulars in the Bee Journal.
W. H. Raftery.

[Three acres would be sufficient for 25 colonies. It requires 4 lbs. of seed to the acre. Sow it in April or May, with any kind of grain or in any soil. It does not bloom till the second season, generally from July 1st to 10th. It blooms 60 to 90 days. For box honey late in the fall, when it begins to bloom cut it back to about six inches in height. Fall frosts will not injure it. Bees sometimes work on it as late as Oct. 1st. Any bee-keeper who has tested it, would not be without it.—Ed.]

Bremer Co., Iowa.—"I put 136 colonies into the cellar on Dec. 1st. The hives were very frosty; the cellar walls are new and full of frost, and water stands on a part of the cellar bottom. Will they winter in it? Which end up should box-hives be placed? Please answer through the Bee Journal."
J. M. Bennett.

[The prospect is not very flattering, although bees have wintered under like circumstances. Place the box-hives upside down. We are inclined to think the worst feature in the case is that the hives were so frosty when put into the cellar. If there is any way of having a stove in the cellar it might be well to *gradually* thaw out the frost; or, if that is not practicable, perhaps a door may be kept open from the cellar to a room up-stairs where a hot fire is kept, and hot stones, or jugs of hot water corked tight, might at the same time be placed in the cellar. We shall be glad to hear how you get them through the winter.—Ed.]

Middlesex Co., Mass., Dec. 6, 1876.—"I followed Quinby in the preparation of my hives for wintering in the cellar, which is warm, dry and dark. I boxed a corner containing the hives and put a chimney in it for ventilation. Sometimes during the day they can be heard a little. What is the trouble? The cellar is not much over 40 deg.; is that too hot? Will it answer to confine them thus all winter? Can they get rid of the dead bees, every means of egress being cut off, by the entrances being covered with wire-cloth? They are box-hives. I intend to transfer them to movable comb hives next summer. I intend to change their places next summer. If I let them have a fly, would it be well to change places then?" A. P. Wyman.

[The temperature seems to be about right. They will do well if put into the cellar the next day after a warm spell, having then had a fly and voided their fœces. Box hives are well enough bottom up. Leave the wire-cloth on, it prevents intruders. The bees will clean out their dead in the spring. If you should give them an airing, put them on the same stands they occupied last summer, else some may be chilled. If you wish, they could be changed in the spring; put a small slanting board at the entrance; it being strange, they will notice it, and thus mark their new location, to find their way back. They will not suffer for being in a cellar 6 months, if they are in proper condition.—Ed.]

"Something ought to be done by the papers to prevent the wholesale robbery that is going on by patent-hive and moth-trap vendors! We hear of one who has sold $5,000 to $8,000 worth of territory in a useless "clap-trap," in this section, and has plenty more of territory for sale yet. He expects to try it in my neighborhood next season, but will find his 'little game' nipped in the bud."

So writes one of our correspondents. One such wide-awake and well posted man in a community is worth his weight in gold to it. His knowledge is "like a city set upon a hill; it cannot be hidden." Bee-keepers should take a paper devoted to their interests, and thus not only derive much more than the paltry two dollars' worth, in valuable knowledge, but save hundreds of times that sum in not being victimized by "clap-trap" and useless "fixings" venders.—Ed.]

☞ Friend M. M. Baldridge, who has been in charge of an apiary the past year near Shreveport, La., returned a few weeks ago to his home at St. Charles, Ill. He reports his yield of surplus honey from 148 stocks at 10,000 lbs.—about one-half extracted and the balance in section boxes. While *en route* for home, Mr. B. visited New Orleans and Chicago, and made arrangements for shipping hives, boxes, etc., from both of these points. See advertisement in this issue.

◆

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and will be a very valuable book for those having use for such a work. It has already received the most flattering testimonials from over 200 of the most prominent mathematicians of the United States. Read the advertisement; the book will be sent postpaid on receipt of the price.

◆

☞ In his "Centennial Letter" to the *Bee World*, friend W. J. Andrews thus speaks of his first meeting with the publisher of the A. B. J.:

"On our entrance, Mr. T. G. Newman, of Chicago, was addressing the Society on Organization. It was quite gratifying to us to hear his eulogy on our Maury County Bee-Keepers' Society, of which he spoke in high terms; the more so, too, because he was totally unaware that it had a representative present. Soon after the close of Mr. Newman's remarks, his eyes fell on us, and recognized us from a photograph and at once introduced himself. Mr. Newman we take to be a good worker, and, if we mistake not, 'a jolly good soul is he.'"

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☞ We desire to caution our subscribers not to send money by mail; either procure a Money Order, Registered Letter, or Draft.

◆

☞ We have received two nicely-printed Price-Lists for Bees, &c., for 1877. One is from J. Oatman & Co., Dundee, Ill., and the other from Dr. J. P. H. Brown, Augusta, Ga.

◆

☞ We have received from Geo. Stinson & Co., Portland, Maine, several pictures recently published by them. Stinson & Co. are among the pioneers in the Fine Art publishing business in this country. A short time since they published a chromo that had a run of over one hundred and twenty-five thousand copies. Their weight, unmounted, was over nine tons. In the selection of subjects, they show correct judgment of the public taste, which natural talent, aided by long experience, alone can give. They publish every description of fine works of Art, from a chromo to a photograph—from a fine Crayon drawing to the most elegant Steel Engraving. They want agents, and offer liberal inducements. See their advertisement in this issue, headed "To the Working Class."

☞ The following is our lowest clubbing rates for the bee publications:

THE AMERICAN BEE JOURNAL, one year, and

Gleanings in Bee Culture, one year	$2.50
Bee-Keeper's Magazine "	2.75
Moon's Bee World "	3.00
All four American bee publications, one year	5.00
British Bee Journal, one year	3.50
All five—American and British—one year	6.50

◆

☞ The Abbott Pocket Microscope, advertised on another page, is an instrument of great usefulness for examining flowers, seeds, plants, insects, etc. It is in a convenient form for carrying in the pocket and is thus ready for use on any occasion when wanted. We will send this microscope to any address by mail, post-paid, upon receipt of the manufacturer's price, $1.50.

◆

In J. V. Caldwell's article on Surplus Honey, page 28, January number, second column, sixth line from top, the reader will please put a period after the word "boxes," to make sense. It was overlooked by the printer.

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☞ Friend Grable, Harrison Co., N. Y., says that his bees are wintering splendidly on their summer stands, notwithstanding the extremely cold weather.

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☞ "Vick's Floral Guide for 1877," a beautifully quarterly journal with fine illustrations and colored floral plate, is at hand. Mr. Vick is so enthusiastic a horticulturist, and has so happy a tact in inspiring his readers with a love of flowers, that his publications awaken a like enthusiasm in their readers. A new feature is added this year to the *Guide*, in a Botanical Glossary, which will be found a convenience to the floral student. Price 25 cts. Address James Vick, Rochester, N. Y.

◆

Honey Markets.

CHICAGO.—Choice white comb honey, 18@25c. Extracted, choice white, 8@13c.

CINCINNATI.—Quotations by C. F. Muth. Comb honey, in small boxes, 15@30c. Extracted, 1lb. jars, in shipping order, per doz., $3.25; per gross, $36.00. 2 lb. jars, per doz., $6.25; per gross, $70.00.

ST. LOUIS. — Quotations by W. G. Smith. Comb, 20@25c. Extracted, 10@12½c. Strained, 7@9c.

INDIANAPOLIS.—Quotations by Barnum Bros. & Co. Choice comb honey in small section boxes, 18@20c.; extracted in 50 and 100 lb. cans, 12@15c; 1 lb jars $3 per doz.; $35 per gross. Mason quarts, with comb, $8.50 per doz.; $95.00 per gross.

SAN FRANCISCO.—Quotations by Stearns & Smith. White, in boxes and frames, 10@15c. Strained honey in good demand at 9@10c.; comb 11@12½c.; beeswax 25@26c.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to The American Bee Journal with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the Journal. Premium queens will in every case be warranted.

☞ The carelessness of some persons is astonishing! On the 19th ult. we received a letter from some one, containing money, that had no name signed to it; neither post-office, county, nor State; neither was it dated! Is it any wonder that money is often lost in the mail? Thousands of dollars go to the Dead Letter Office every month because the address is either incorrect or unintelligible. In many cases the name of the sender cannot be ascertained, and the money is *lost* to him. We sometimes have as many as three or four letters during a week from the Dead Letter Office, that were mailed without a stamp, costing us 6 cents each. Many also write a letter or article for The Journal and send it *open*, only putting on a one cent stamp. This makes a charge of *five cents* to us on every such letter—for no written communication can be sent by mail for less than 3 cents, unless it is on a postal card. Careful attention to the postal law will save trouble. If one is in doubt, it is the safest way to consult the local postmaster.

☞ The Quinby Smoker has been much improved this winter. In the *new* Quinby Smoker the valves are so arranged that by removing the small screws they may be readily examined, if from any reason they should get out of order. The valves are soldered and so arranged that they will remain open, giving a draft and preventing the fire from going out. The bellows are made of heavier leather, and will be much more durable than formerly.

☞ Subscribers will please notice the date upen their subscription labels and see that they are "up with the times."

Dr. J. P. H. Brown offers as a premium to the person sending the greatest number of subscribers to The American Bee Journal, between now and the first of July, a tested queen of imported mother. The queen to be sent upon presentation of certificate from the publisher, certifying to the number of subscribers sent.

☞ For hive making there can be nothing more convenient than Barnes' Foot Power Saw. Any person who has one could not be induced to dispose of it. The machine is sold at a low price—only $35.00—which includes a "slit saw" as well as a "cut off saw," and the necessary gauges. It will cut through one inch pine boards at the rate of 8 feet per minute, line measure, and will cut either thicker or thinner lumber. We will supply it at manufactur's prices, and advise all who need such an article, to procure it. Several letters in this issue mention this saw as the best thing out for making hives. Of it, "Novice" says:

> "This machine is one of the brightest illustrations of genuine Yankee ingenuity that it has ever been our fortune to meet, and the simplicity and fewness of its parts are really surprising. With the new and novel foot-power, the only wheel about the machine, except the saw, can be instantly set humming like a top, and one of the prettiest little saws can be attached to it in a little more than a second of time, yet the whole is so extremely simple that even a child can do nice, true work at once. At our first attempt we sawed one foot of ⅞ in. pine in six seconds."

We would call the attention of our musical friends to the following magazines:

Peters' Household Melodies, containing five or six beautiful Songs and Choruses.
Peters' Parlor Music, containing several easy Piano Pieces.
La Creme de la Creme, a collection of difficult Piano Music by the best European authors.
Peters' Organ Selections, for Reed or Pipe Organ.
Peters' Sacred Selections, containing Hyms, Anthems, etc., and
Peters' Octavo Choruses, containing four choice Choruses for Singing Societies.

These magazines are published at the uniform price of $2 per annum, post-paid, and we have no hesitation in saying that they are unequalled in quality, cheapness and elegance. Give your newsdealer 25 cents, and tell him to order a sample copy, or send direct to the Publisher, J. L. Peters, 843 Broadway, New York.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for The American Bee Journal?

Our Letter Box.

Wenham, Mass., Dec. 27, 1876.—"Our bees have not had a chance to fly for 6 weeks. They are wintering nicely. We have two feet of snow and splendid sleighing."

H. Alley.

Hamilton, Ont., Jan. 1, 1877.—"Bees did well in this section last season. I got nearly 100 ℔s. per hive, besides increasing two to one, with the aid of comb foundation, which I shall use as long as I can get it."

J. A. Waterhouse.

Santa Clara Co., Cal.—"One of the best and handiest smokers is a piece of decayed wood, sawed about 1½ inches square, with a ¼ inch hole bored lengthways. It can be held between the teeth."

S. S. Butler, M. D.

Lenawee Co., Mich., Dec. 26, 1876,—"Bees did well the first part of last season, but after the middle of August they made no surplus. I commenced in the spring with 15 colonies in good condition, increased to 43, and have taken 1,600 ℔s. of box honey and 300 ℔s. of extracted. My bees are all in the cellar, and I keep the temperature at 35 deg."

R. Forsyth.

Henry CO., O., Jan. 1, 1877,—"I have 75 stands of bees. I have kept bees for 27 years. They are my delight. I expect to keep them as long as I live. I am much interested in those essays in the December number. I have read them, and intend to put in practice many valuable hints that I got from them."

D. Clifton.

Pottawattamie Co., Kansas, Dec. 29, 1876. —"Last spring I had 36 good colonies, besides a few weak ones; I increased to 60. Although the 'hoppers devoured the buckwheat, I got 1,300 ℔s. comb and 500 ℔s. extracted honey, which I sold at from 20c. to 25c. per ℔. California honey interfered with the sale some, but I will let them know that in Kansas we can produce superior honey as well as fruits, and supply them as cheaply as they dare. We shall make it lively for them soon."

Jacob Emmons.

A Chip from Sweet Home.—Dec. 21, 1876. —"I have 172 hives in my cellar; for several days one hive has been making considerable noise, and this morning much worse. Upon examination I found that they could not get any fresh air; it was closed top and bottom; upon opening, they rushed out as in summer, but soon returned and are now quiet. No smell of any disease as yet. Could have sold a thousand pounds more 'slung' honey at 15c. if I had had it."

D. D. Palmer.

Northumberland, Pa., Dec. 26, 1876.—"I had 15 stands in the spring; 5, in good condition, went off, leaving from 30 to 40 ℔s. of honey in each hive. The other 10 did well till July, but gave no surplus after that. I had to feed them; a thing I never had to do before. I had some in the cellar and some out-of-doors, but as the winter is severe, I expect to loose them. My great trouble is in springing."

W. H. Garihan.

Buffalo, N. Y., Dec. 26, 1876.—"My bees have done nobby the past season, both in colonies and honey, and I am more than ever attached to them. Success to the A. B. J."

Mrs. Wm. Harris.

Sanilac Co., Mich., Dec. 28, 1876.—"A neighbor purchased a few stocks of bees, but as the weather was cold, and they could not fly out after removal, he made a frame 3½x4 ft., covered it with mosquito bar, placed a hive in it, in a warm room, and sent for me to assist him. In this way they all had a nice fly and settled back quietly in their hives. The past season was a poor one for honey. I have 60 colonies on their summer stands."

J. Anderson.

Cass Co., Mo., Dec. 29, 1876.—"Last spring I had 72 stands, all wintered safely. I use the Langstroth hive. The bees swarmed considerable in June, and did not store much honey till August 1st. Then they stored honey fast till frost. I got 5,672 lbs. of extracted, 2,323 lbs. of box, and 1,055 lbs. of honey in frames; total, 9,050 lbs. From 72 colonies in the spring, I have now 120. I am wintering 54 on their summer stands. I drove stakes in the ground and packed flax around them in the sides and back, leaving the front open. The balance are in a cave or clamp, and are doing well."

Paul Dunken.

Shelby Co., Iowa, Nov. 3, 1876.—"Thinking that a report from this section might be acceptable, I inclose the following: Started in the spring of 1876 with 53 stands, mostly Italians. The season was good until the middle of August, at that time we had 2 or 3 cold days, followed by wet, rainy weather, which stopped work in boxes, and as the weather continued unfavorable until nearly the last of September, our fall harvest was almost a total failure. Still we feel that we ought not to complain at the season's result. We have taken over 1,600 ℔s. of extracted and 1,100 ℔s. of comb honey, and increased to 78 stands. Net proceeds, $10 per stand. Our principal resources for honey are:—linden, sumach, wolf-berry, hearts'-ease, golden-rod and asters. We sell our honey at home, at 15c. per ℔. for extracted, and 25c. per ℔. for comb honey. Have kept bees here for 4 years; have never lost any by disease of any kind. We winter in a frost-proof cave. Success to the Journal."

Mrs. Eunice Truman.

Knoxville, Iowa, Jan. 3, 1877.—"This has been a good season, but my bees have not done very well. Last season I wintered six on their summer stands, and now have ten wintering in the same way. I use a movable comb hive of my own "get up." I have had 62 lbs. of comb honey. They would not work well in boxes, and if I had an extractor I could have taken more honey from them. I have black bees but shall Italianize next year."

J. W. Bittenbender.

Erie Co., Pa., Jan. 3, 1877.—"One year ago I wintered 44 colonies of bees on their summer stands, protected by boxing in chaff. The past summer I sold one ton of box honey, averaging 20 cts. per lb. I have increased to 87 strong stocks, and am wintering all on their summer stands. I never lost one by this method. I use the American hive, with 6 side boxes attached to rear in place of observation glass. Purchased several queens of Mr. Nellis and introduced them with entire success. I take the JOURNAL and *Gleanings*, and read them with much devotion. Am very hungry for bee reading when the monthly messenger comes. Our honey was most entirely from white clover, the past season. Golden-rod and buckwheat did not mature, in consequence of the drouth. Have never used the extractor, will give it a trial the coming season. I equalize my stocks in the fall, by interchanging combs." D. VIDETO.

Washington, Ga., Jan. 3, 1877.—"Bees, thus far, are wintering well; though this is the coldest winter we nave had in 20 years."
J. B. FICKLEN.

Pendleton, O., Jan. 7, 1877.—"The Binder is received. It is more convenient than I thought it could be. I like friend Andrews' suggestions and intent to talk the matter up in this township. We can have an intelligent Society, as we have the material. Friend Andrews should have given his address. Please give it." W. STUMP.

[W. J. Andrews, Columbia, Tenn.—ED.]

Kane Co., Ill., Jan. 7, 1877.—"I commenced in the spring of 1876 with 50 swarms. They increased to 120; have sold 51 swarms, and have 69 left, which are now in winter quarters. I have sold 3,200 ℔s. of box honey. The season was the best we have had for 7 years. Long live THE AMERICAN BEE JOURNAL." JOHN DIVEKEY.

Maryville, Tenn., January 4, 1877.—"The honey harvest for the past year was rather poor; in the first part of the year the fall bloom yielded largely, but I did not take any of it. They seemed to be in a fair condition for winter. Yesterday (Jan. 3) the thermometer indicated 23 deg. below zero; the coldest we ever had in this section. The 'cold snap' has lasted now for 4 weeks. I am afraid that the weak swarms have 'gone up.' The deep snow covering the hives may protect them. It (the snow) is 15 in. deep; nothing like it in the memory of the oldest inhabitant. I have 66 hives; average surplus for the past season, 3½ ℔s. No increase, owing to very bad weather. Last year I lost 43 colonies." W. T. PARHAM.

Putnan Co., Ill., Jan. 9, 1877.—"We are just awake in regard to bee and honey culture. The past season my bees made honey very fast until July 20, making 400 4-℔. boxes of honey up to that time; since then they have emptied nearly 1,000 boxes, which were nearly full at that time. I have now 257 stands. I was beaten a little at the Winona Fair. I entered 4 stands of bees and 100 ℔s. of honey in 4-lb. boxes. Mr. Brooks, of Lexington, entered two stands of bees and about thirty pounds of honey. I got the first premium on bees and Mr. Brooks on the greatest display of honey. It appeared to me that I ought to have had the first premium on greatest display, he having only 30 lbs. and I 100 lbs. Mr. Brooks is in partnership with Mr. Reynolds, of Lexington, Ill. The committee wished to taste my honey, and I think they liked it very much, as they never returned either honey or box. I winter my bees on their summer stands." OTTO HALBLEIB.

San Buenavertura, Cal., Dec. 29, 1876.—"We have only had a small shower since last March, but hope it will rain soon. Our bee are flying finely every day, gathering some pollen. These beautiful moonlight nights it is pleasant to walk out and hear the old ocean roar. Most all the honey is sold out of this country. I am holding on to 15,000 lbs., and am pleased to learn that the price has advanced 2c. per lb. in San Francisco, during the last month. With my one-horse Barnes' saw-mill I am just shelling out the bee hive stuff." R. WILKIN.

Boone Co., Ky., Jan. 4, 1877.—"We have had nearly 40 days of continued excessive cold weather, the coldest ever experienced in this latitute; which makes us begin to fear for our pets, and gives us visions of depopulated stocks, "bee-cholera," etc. Success to the old reliable AMERICAN BEE JOURNAL. We would feel like abandoning bee-keeping altogether, if compelled to do without its cheerful visits."
J. T. CONNLEY.

Stanslaus Co., Cal., Jan. 6, 1876.—"My bees (28 old stocks and 30 swarms) during the past season, produced about 5,300 ℔s. of comb honey, mostly beautiful white. I have an extractor, but did not use it; it does not pay here. My cases for storing surplus are admired by all for their simplicity and convenience for handling. I will send you a miniture case, just as I cut it by my 'Barnes' foot-power saw.'"
J. F. FLORY.

Berrien Co., Mich., Dec. 10, 1876.—"One year ago last fall I put 10 stands of bees in an out-door cellar, and in the spring I brought out 4 weak swarms. I bought one stock of Italians of Mr. Adam Grimm. I have now 25 of A. G. Hill's "Winter Bee Hives." When Mr. Hill came to see me, the Italians were too week to swarm, and so was one of my black stocks. Mr. Hill transferred the weak black stock, took the queen from the Italians, and put it with the transferred one. Nine days after that I divided the Italian stock into 4, as Mr. Hill advised, but as I had only queen cells in 3 combs, I had to cut out one to make the 4 swarms, and as I was a green hand at it and did not do it just right, the queen did not hatch out. A fertilized worker laid eggs, but these produced nothing but drones; the other 3 stocks each raised a nice queen. After those queens began to lay, I took out one comb with brood and eggs, put it into the failing stock; by this time the stock had a queen almost ready to hatch. An examination 24 hours after, showed that they had the queen cell destroyed and another one in the given comb started. They raised a good queen and it got to be a strong swarm by fall. The other 3 made about 120 ℔s. of box honey in Hill's section boxes, and if buckwheat had not come out so badly, I believe they would have made as much again. The 3 stronger swarms of blacks Mr. Hill swarmed artificially. I then spent two days with Mr. Hill, trying to learn his way of raising bees. After Mr. Hill left me I followed the instructions of the BEE JOURNAL and increased to 19 stands, with which I went into winter quarters, in good condition. Nine are in Hill's winter hives: 6 in the Langstroth hive, from which I took off the upper cap and made 9 rough boxes, fitting over each hive; 4 are in common box hives. I put them all in a row; put boards and straw around them, and are all drifted in snow now. I wish you would give some instructions, through the JOURNAL, about queen raising." CHRIST MILLER.

[If you will look over the back numbers you will find instructions for queen raising. One plan is to deprive a colony of its queen and after ten days destroy all queen cells, and give the colony brood from the choicest queen; from this a number of queens will be started, and in about ten days from the time the brood is given, each queen cell may be cut out and given to a separate nucleus. This nucleus may consist of one, two or three frames of the same size as those used in the ordinary hives, with bees enough to take care of them. Queen raising may be commenced at any time after drone brood is found sealed over.—ED.]

Blair Co., Pa., Jan. 10, 1876.—"My bees have done well. I commenced in the spring of 1876 with 15 colonies; increased to 21 by natural swarming; have taken between 500 and 600 ℔s.; extracted a barrel or more, and hard as the times are, have sold nearly all at good prices. Comb at 25, 20, 15c. per ℔.; extracted, 20, 15 and 10c. per ℔. I think my bees are making me a fair business, considering the little attention I have given them. I have attended to my farm of 90 acres, with but little help; so the bees only got my spare moments. I put them into winter quarters, all, with the exception of 3, in splendid condition, and had it not been for the Centennial, probably they would have been good too; but I think one could easily afford to have 3 weak colonies for what they saw there. My 'little pets' I think must be tired hugging close together, they have not had a fly since the 10th of Nov., and we have had very cold weather. Accept my very best wishes for the 'old and reliable' AMERICAN BEE JOURNAL; that it may wave long, wide and high." FRANK M. GLASGOW.

Wayne County, Mich., Jan. 12, 1877.—"A neighbor who has some 25 or 30 swarms in box hives, says he has watched the queen in his glass hive, and seen her mate with the drone in the hive, and in about 3 days will commence laying, and in about 2 hours will have all her laying done, when she will again mate with the drone. Is there any truth in this statement?" W. M.

[None whatever; he fancies he saw it, but was deceived. The queen never mates with the drone but once, and then on the wing.—ED.]

Hamilton, Ont., Jan. 6, 1877.—"Bees are very quiet in the cellar. The mercury stands at 40 deg." M. JOHNSON.

Crawford Co., Mo., Jan. 8, 1877.—"I have 13 stocks safely wrapped in clover hay, on their summer stands. They have stores plenty to last till spring. Our fall flowers are mountain ditny and golden-rods, and are very abundant." JOB HARMAN, SR.

Cayuga Co., N. Y., Jan. 10, 1877.—"The January number of THE AMERICAN BEE JOURNAL is received, and well sustains its claims to superiority and progress. I think the right man is at the helm, and wish you success." J. W. GUTHRIE.

Benton County, Mo., Jan. 9, 1877.—"The honey season was not as good in 1876 as in 1875, although we extracted 297 gallons, besides box honey not a little. I hope this may find the 'old, reliable' A. B. J. with more subscribers and more prosperity than ever." MRS. J. W. DICK.

Oneida, Ill., January 15, 1877.—"FRIEND NEWMAN: In regard to queens being lost by hives being placed in straight rows (as spoken of, on the reading of my little paper at the Mich. B. K. Association) I would say that the last season my hives stood in 3 rows, 2 facing east at about 8 ft. apart, and the 3rd at the north ends of the two rows facing south. The hives stand under trees, surrounded by bushes, so that all the bees have to fly out into one common space and go up almost straight into the air to get out over the tree tops. The bees coming and going, look like a huge funnel in the air. I raised quite a number of queens during the summer, and only lost two, and they might have been killed in many other ways besides getting into the wrong hives. My hives are all of one color and look alike, there is but 1 ft. between the hives." WILL M. KELLOGG.

Brown Co., Wis., Dec. 29, 1876.—"My bees have done splendidly. From 3 swarms last spring, I increased to 22, and lost one by robbers. I had also 160 ℔s. of honey from them. I am satisfied that bees want water from the middle to the last of December, and when housed it is necessary to supply them with it. Am I not correct?" C. R. CLOUGH.

[Bees may need water in winter, but the fact that so many colonies have gone through the entire winter, in close confinement, in excellent condition, without any water being supplied, leads pretty strongly to the opposite conclusion.—ED.]

Harrison Co., Texas, Jan. 9, 1877.—"We have had an uncommonly severe winter here—snow 16 in. deep—the like of which we have never seen before. Our bees (which we always winter out-of-doors) have suffered some—some weak swarms have perished. The last season here was as good as usual for honey. West of here, on the prairies, bees gathered but little honey. Judge W. H. Andrews, in Collin County, writes me that his bees did not gather enough honey to keep them through the winter. Out of 200 stands he has already lost 30, and is compelled to feed, or all would die. I had about 8,000 lbs. of honey last season, and found for all of it a home market at 15 to 25c." W. K. MARSHALL.

Grimes Co., Texas, Jan. 5, 1877.—"In this part of Texas bees have not done well during the past season. We had excessive rains in the spring, long drouth in the summer and fall, and extremely cold weather in December and so far in January. To-day is pleasant and promising." IRA M. CAMP.

Correspondence.

For the American Bee Journal.

The Candying of Honey.

Having read a great many reports and theories about honey candying, I will put in my mite for what it is worth. This summer, as I extracted, I emptied the honey into an open-ended barrel until it was nearly full. I then drew it off from the bottom into self-sealing glass fruit cans, and placed them in a box that held two tiers of jars; 45 in a tier with a close-fitting false bottom between them.

About the 1st of September I pasted labels on all that were in the top of the box except four, having to lay the jars on their sides to do it. I also opened the box several times to take out jars as I needed them.

The other day (Nov. 28) I examined the jars that were left in the top of the box and found them all candied, except the four that had no labels on them, and not one of those that were in the bottom of the box, as far as I examined, were candied. In those that were candied I observed that the tops of the jars were always candied more than the bottoms. Now have I a right to draw this conclusion: honey will not candy so soon when it is kept from the light and is not disturbed, as when it is disturbed and exposed to the light.

I have also observed that in a lot of 1 and 2 lb. jars that had been filled out of the same vessel and had been exposed exactly alike, as far as I knew, some two or three of them would be as perfectly clear of candying as they were the day they were put in the jars, while the others would all be more or less candied. In making experiments would it not be best to take a dozen or more jars and expose them to the same condition, instead of a single jar, as reported by one of your correspondents?

Bees have done extremely well with us this season, giving both increase and surplus, but from what I observed there will be a great many of the swarms that came too late to lay up enough stores for winter. The most of my neighbors are still using the box hives, or are afraid to work with the movable frames when they do have them. W. S. Boyd.

Dubuque, Iowa.

For the American Bee Journal.

How I Winter My Bees.

Mr. Editor:—I want to tell you how I am wintering my bees. I live on the White River. The river makes one of her largest bends here, circling round near 1,000 acres of first and second bottom lands. I live on the second bottom land, which is underlaid with gravel and sand; though mostly sand. As this makes the best cellar, I resolved last fall to have one for my bees. I dug 6 ft. deep; struck pure sand at 5 ft. deep; walled it with boulders 8 ft. high; walls 18 in. thick. I filled up around the walls a foot, with the dirt I took out of the cellar. This leaves a foot of the wall above the ground. Over head it is sealed to the joists 8 in. high, with a floor above, and filled in between with sawdust. So I have it 10 ft. wide, 8 ft. high and 13½ ft. long in the clear. I put my 50 colonies of bees into it on Nov. 25.

The temperature stood at 44 deg. till the cold weather came, then it went down to 40, where it stands without change. I have some apples and potatoes in it. The temperature is too high for them; at least they are rotting badly. I never saw bees in nicer condition than they seem to be. Have two nuclei with about a pint of bees each; they are all right. They have lost but few bees. I bought 4 colonies of black bees, about 10 days ago, that had stood out up to that time. I brought them home some 30 miles, part of the way on freight cars, the rest in a buggy. I put them into the cellar. One of them has the cholera a little, and is very restless, while all the others are very quiet.

I turn the box hives upside down and leave on the honey boards of the movable-comb hives, to get rid of the moisture—which condenses and stands in drops about the ceiling, but does no harm. The bees are perfectly dry.

The bees in this locality that are wintering on their summer stands are half dead now, and the rest badly diseased. I think there will be but few left by spring. A neighbor said to me yesterday: "You will save bees enough to pay for 2 or 3 cellars this winter."

I ventilate by opening the inside door, while the outside one is shut; this gives plenty of air, as the cellar way is outside.

Hamilton Co., Ind. John Rooker.

For the American Bee Journal.

Our Michigan Convention,

Mr. Editor, is over, and we have had a good visit, seen each other's faces, talked over our centennial poverty, and concluded to go right on with the business, as no one wants to buy us out. "Stick to one thing, for success." We will probably meet success face to face, by and by, from force of necessity. Our "supply table" was rather bare this time, the only fixtures gracing it being a patent duplex, close-communion, box hive, a choice Michigan box of honey (4 lbs. gross) and a bee-smoker presented by Mr. T. F. Bingham, of Abronia. Well, as much as I guard against apiarian supplies, I fell into the line with the rest, and all the members but two subscribed for one each, at $2. Though I have used up two Quinby smokers within two years, if this one does not last ten years, and burn all that time if kept filled with fuel, I shall be more deceived than ever before. A strong, durable smoker is one of the few necessaries to a well regulated apiary. I hope this honest, solid implement will soon grace your curiosity shelf.

I think probably Novice is correct in regard to bee-keepers' conventions, that they afford merely nothing of pecuniary advantage, compared with the expenses of attending. If some of us cannot afford to pay for a bee journal, how can any of us afford to pay out from $2 to $20 to attend a convention? Perhaps bees will pay such expenses, but not at "Michigan Apiary." I think by far the best reward for the outlay will be realized by actual visits to our nearest successful apiarists. Sectional meetings, not extending over 50 miles, with discussions in the apiary are perhaps worth more than any convention can be. Such meetings *are* held, at least annually. Will some brother please give us his opinion, who belongs to some such gathering?

The papers read, and report of our Convention, will no doubt show your readers that there is in apiculture, as in politics, two parties whose interests are as varied as to have a post-office or not to have one. We all seem to possess enough of the "first law of nature" to work for our own interest. The practical producers seem to desire good prices and ready sale. This may seem strange but it is a fact. They also "smell danger from afar" as well as at home. This "danger smelling" is not much of an epidemic, but is as contagious as small-pox. It is spreading among practical honey producers, like the sweep of "that bee disease" but has exactly the reverse effect on their purses. I have seen several cases of it, and will describe its cause, symptons and cure:

CAUSE.—A sudden discovery of the true way to manage an apiary, or large yield of surplus honey, or both.

SYMPTOMS.—Weakness in the thumb and two first fingers of the right hand, which disables the patient too much to hold a pen. Loss of memory; he can't recollect how much surplus honey he did get. Gets too poor to take more than one bee journal,and in his delirium decides that the AMERICAN is the only one strictly devoted to his interest. The stomach gets weak, and the sight of tin corners, kettle feeders, and kindred fixtures produces nausea.

CURE.—A sure cure can be found in any one of the following remedies: A dose of patent hive, or a mixture of Italian queens, honey extractors, queen nurseries, etc., also a salaried situation. I will here add that it is with great difficulty the patient can be persuaded to take any of the above doses, so probably the disease will spread in the future as it has in the past two years or more. JAMES HEDDON.

Dowagiac, Mich., Dec. 26, 1876.

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Various Matters.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

Gentlemen of the Michigan B. K. Association:

Our object in choosing a theme so indefinite in its bearing upon apistical science in general, for your consideration, may not at first sight be apparent. In canvassing the main topics that are at present of more than ordinary interest to us as individuals, and as a representative body of American apiculturists, representing as we do, one of the fairest commonwealths of our common country, we found a desire to say a word or two in regard to many of them; and so we have chosen a topic that will allow us full latitude to ramble at will o'er the broad and diversified fields of modern apiculture, culling here and there a flower whose beauty and fragrance may delight the eye and please the finer senses of the soul. While for the most part we have to deal with facts, and hard, stern facts many of them are, yet we cannot but admit that our chosen field of labor calls into play the higher mental faculties—a happy combination of the real and the ideal—in a marked degree; while the mental effort necessary to the successful solution of many a knotty problem, sharpens the perceptive faculties, enlarges the reasoning powers and strengthens the intellect. This much of the poetic, now for a little prose. If our heading be a little ambiguous, we propose to make our meaning unmistakable.

First of all we shall address ourselves to the task of a brief consideration of that very delicate subject—artificial comb foundation. Many years ago, Mr. Samuel Wagner, the founder, and until 1872 the able editor, of THE AMERICAN BEE JOURNAL, conceived the idea of making comb foundation, to be accepted and lengthened out by the bees, and obtained a patent thereon. For a time but little came of it, at least so far as the bee-keeping public was concerned. The subject was revived, however, in later years, and samples of Mr. Wagner's foundation were sent out to bee-keepers residing in different States, on trial. It was our fortune to test several of these sample sheets; but in each and every instance they proved an utter failure. In the mean time Mr. Quinby constructed sheets of comb made of metal, the cells being of full natural depth and coated with beeswax, but owing to the expense of construction, it never came into general use. From this period until about two years ago, there was a lull in the foundation business, when a certain John Long appeared upon the scene of action and announced in clarion tones that he had attained the summit of success in the manufacture of artificial comb. Before the close of 1875 his advertisements contained testimonials, the mere perusal of which was enough to convince the most skeptical, that here at last was a grand discovery pointing out the "royal road to wealth." Time rolled on and ushered in the Centennial, whose shining car of (apistical) progress contained a new factor in this foundation problem. From an attentive perusal of a spicy little sheet that is devoted only to bees and honey, we gleaned the fact (no guess work) that "pure yellow wax," when pressed between two rollers was ever so much better than the "clumsy, awkward comb" made by the bees. As we perused this glowing tale in a "paraffine" sheet that never recommended anything, the value of which had not been most thoroughly established, we mentally resolved to "invest." The result is already known to many of you. Mr. J. P. Moore, of Binghamton, N. Y., has in an article prepared for your consideration,most thoroughly canvassed the value of comb foundation for surplus honey, so that we pass this portion of the subject, and confine our remarks to its value in the brood chamber.

We experimented quite largely with this object in view, and under a great diversity of circumstances, with a full determination to satisfy ourselves in regard to the claims made for this much-lauded article. The result was anything but gratifying. A frame of foundation placed in the brood nest of a full colony, would be lengthened out in from 3 to 6 days, provided the weather was warm and honey was coming in freely; while an empty frame would be filled with natural comb by the same colonies in one-half that time. During cool weather or when honey was being gathered in small quantities, the foundation was, in almost every instance, utterly neglected by the bees. In very warm weather the foundation would sag and bulge, so as to make the cells anything but an improvement upon the "mathematical accuracy of the bees," unless it was of extra thickness; while in every instance the queen would not deposit even a single egg in such combs; nor did we succeed in having such comb occupied by the queen unless the foundation was so thin that a temperature of 90 deg. would render it almost worthless. In the article already referred to, by Mr. Moore, he brands the foundation as a humbug of the first water, when employed for the purpose of obtaining surplus comb honey, and in our experience this applies with double force when used in the brood chamber.

The next thought that occurs to us brings to mind the "house apiary," which involves many topics of vital interest to apiculturists everywhere. You will doubtless recall the fact that at our last semi-annual session that subject was canvassed with the conclusion that it had but little to recommend it. Circumstances were such with us last spring that we were compelled to give it serious attention, and the result was the erection of two houses, each 12x25 ft., and a capacity of 104 colonies for the two. While we had anticipated many advantages from their use, the season's experience has more than justified our expectations. Disadvantages incurred by their use were anticipated and overcome, and to-day we really feel as though we never cared to keep another colony of bees on the old, out-of-doors system. We will chiefly consider the one point that is of greatest interest to apiculturists generally—its relation to the production of surplus honey.

The past season has, with us, been an unusually poor one for honey, and was therefore especially favorable for testing the value of the house; for it is an easy matter to obtain honey in a good season, but to succeed in a very poor or even moderately good one, requires skill and a thorough knowledge of the business. Any method therefore, that will enhance the certainty of results must be valuable.

When the linden blossoms began to unfold themselves, our stocks were about equally divided between the houses and the old method of summer stands. We were not long in discovering that the housed bees commenced more readily in the boxes, and stored honey more rapidly. The cool nights would generally suspend operations out-of-doors, while in the house the combs each morning presented a marked increase in size. This state of things continued until the honey harvest closed; when we found that we had some marketable surplus inside and but very little out. Our three best colonies in the house had stored more honey than 60 had out-of-doors; the brood chambers were better filled for winter, and as for bees—well, we never had such populous colonies before, under any circumstances.

The only serious objection that we had anticipated was in manipulating stocks in the house; but after a little experience we found no difficulty in that direction. As for stings, we scarcely ever were reminded of the pessession of that implement of warfare by the yellow workers. During the basswood harvest we used no protection while working in the house, often dispensing with coat and hat, and seldom receiving a sting; while out-of-doors we were compelled to wear a veil and then was stung times almost without number.

Now we don't wish it understood by anyone that we recommend the house apiary for general use. It is adapted only to the wants of the specialist, and even then might not prove a success in all cases. But with us it has been all that we could reasonably ask, while in wintering and springing bees we anticipate its greatest value; and the indications are that we shall not be disappointed in the result

Really we started out with the intention of canvassing several other subjects, but this paper is already too long, so we forbear. HERBERT A. BURCH.

South Haven, Mich., Dec. 20, 1876.

Bee Culture in the South.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

Since the winters have been making such sad havoc with Northern apiaries, many of our bee-keepers have turned their eyes Southward. The accounts given of the "Sunny South" and the certainty of mild weather during the winter months, induced many a Northerner to wend his way thence. So great has been this emigration to the South that some one has turned Horace Greeley's advice: "Go West etc.," into "Go South young man, go south." Since there were among all these "carpet-baggers," many bee-keepers who were in search of a climate more favorable to their pursuits, it may be of interest to glance at the facts connected with bee-culture as it exists in the South, and also at the advantages and disadvantages which that portion of our country offers to those who engage in this pursuit.

Early in the spring of 1874 I found myself *en route* for this far-famed "Sunny South." I must not forget to mention the pleasant little visit I had with one of Michigan's enthusiastic bee-culturist—Prof. A. J. Cook—as well as with his pleasant lady, before finally starting out.

As the train bore me from the "City of the Straits" the air was filled with myriad flakes of beautiful snow, falling as complacently upon their brethren—already a foot deep—as though Michigan were theirs for a century. At Cincinnati the delicate pink blossoms of the peach could be seen. Rattling over the ridges and bridges, and thundering through the tunnels and archways that lie on the way of the Great Southern Railroad as it crosses Old Kentucky, we found ourselves nearing the city of Nashvilte. Here the passenger—so suddenly transported from dreary regions to those where verdant spring was smiling—could not help but be delighted. The meadows were bright and green, while here and there an apple orchard gave forth sweet perfume. Everywhere bright yellow flowers were peeping forth and the hum of thousands of busy workers among them, betokened that they were rich in sweets as well as color. I afterwards found this plant to be the *Visicaria lesecuria*, of the order *Cruciferæ*, related to our common mustards, water-cresses, etc. It is a harmless little plant growing only in that locality, blossoming very early—most of its blossoms appear before apple bloom—and then entirely disappearing. I think it could be easily introduced here, and would prove a valuable acquisition for early pollen and honey.

During the 2½ years following my arrival in Tennessee, Alabama, Georgia, S. Carolina, N. Carolina and W. Virginia. I found the mass of the planters who possessed bees more ignorant than the farmers of the North, in regard to this subject. The old bark or log gum is more generally used, and the brimstoning method is more common than here. Instead of securing the surplus honey in boxes or supers placed over holes bored in the tops of the hives—a method commonly pursued among box-hive bee-keepers here—they knock off the tops some dark night and perform the operation known as "robbing the bees," by cutting out the honey as far down as the brood. Every darkey—big or little—smacks his lips when the word goes round: "We's g'wine t'rob de bees tu nite." The popular belief is, of course, that bees always gather honey during the whole of the summer season, hence it is inferred that midsummer is the best time to "rob the bees," because then the hives must be full of honey, which if then removed will leave space and time to fill up before the winter season. The bees are rarely looked after except when swarming and robbing times come. Often during the summer months, especially the latter part of summer, severe droughts and extreme heat cut off all bee forage. Any intelligent bee-keeper can easily see that great losses from starvation and robbing must at times occur. I dare say that three-fourths of the bees that die in the South during the winters die of starvation. Here and there frame hives have been introduced and bee journals and extractors are known. Yet the patent bee-hive men have been on hand with their moth-trap, sliding, combination, patent reversible fixtures, to the detriment of the real movable comb principle.

It is my observation that the further south one goes the poorer the quality of honey gathered, even though it may be gathered from blossoms of the same species. A few general and admitted facts will prove this. Those who have tasted the honey gathered in Minnesota all attest its very fine flavor, in fact all call it "beautiful honey." The honey of California is very highly spoken of. Our own Michigan honey is of superior quality. That gathered in the mountain regions of Tennessee, N. Carolina and Virginia more nearly resembles in color and quality that gathered in the North. But when we came to the plains of Georgia and the sandy, open portions of S. Carolina, the honey becomes dark and of a strong disagreeable flavor. The specimens from Florida that I saw, were very dark and strong. The honey from Cuba it is well known is almost black and unfit for food. It is sold in N. Y. City markets for about 90c. per gallon, and is used by bee-keepers for spring feeding. The fact is the flora of the North under the influence of our occasional rains and milder sun, is more vigorous while growing, and seems more adopted to the production of honey than the same or other plants grown in the South. Not only is the quality better, but in general the quantity produced is greater. The South is so subject to floods and droughts that there is less dependence to be placed on the yield of honey than in the North. The bees hang idly about their hives during 2 or 3 months. The common white clover which furnishes our bees with continuous pasturage during the summer months, is eminently a plant of the colder portions of the temperate zone, hence south of Tennessee it is not abundant, in fact it does not grow well in that State, though people there *think* it does. They have never seen the beautiful verdant clover pastures of New York and Ohio. There are, however, several honey-producing trees and shrubs peculiar to the South, as Sourwood (*Oxydendrum arboreum, Ord. Ericaciæ*), related to our huckleberry and wintergreen, and in the same family, the Laurels. They have, too, the Honey Locust and Black Gum. Cotton blossoms also furnish honey. The Tulip-tree—called there, poplar—and several kinds of astors thrive and furnish large yields.

But in bee-culture it is only in wintering that I perceive the South can claim any advantage over the North.

There are many reasons not within the province of an article on bee-culture that incline me to advise my Northern friends to be content where they are. If we cannot winter our bees successfully here every time, then they may be shipped South in the fall and back North the following spring. Even with this pains to winter them, if skillfully managed, they will return a good percentage on the capital employed. FRANK BENTON.

Detroit, Mich.

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Coe's House Apiary.

SENT TO THE MICH. B. K. ASSOCIATION, BUT CAME ONE DAY TOO LATE TO BE THERE READ.

The house apiary is a building used as a permanent summer and winter receptacle for one or more hives of bees; and may be of any desired shape or size.

The floor, walls, ceiling and roof are made up of a series of dead-air spaces, which give ample protection against dampness and extremes of heat and cold. A house, 9x15 ft. will hold 44 hives; one 11x34 ft. will hold 100 hives. The hives are placed on shelves along the sides and one end of the room; lower shelf 4 in. above the floor; space between shelves, 30 in.; double door in north end, window in south end. Alighting boards, 9 in. wide, projecting outward 4 in. Passage from alighting board into hive, ⅜x9 in. Outside or winter door to be taken off in summer and a wire-cloth door put on in its place, arranged to close itself; close shutter over window outside, movable wire-cloth screen inside. Frames of any shape or size can be used, by hanging them in a box without bottom or top. But the most attractive and best hive for all purposes is the "Observatory Hive," made of 8 close-fitting frames, 12 in. wide and 14 in. high, with board-end next the wall, and a sash with 8x10 glass for front end; openings on top and at bottom of each frame to admit bees into top and side boxes. By taking off sash, surplus boxes can also be put on right against the outside brood comb.

This style of hive gives the apiary a very attractive appearance, and is more reliable for general use than the shallow frame. Each hive is covered with a quilt made of woolen goods, long enough to hang down over the glass front. In winter this is turned back over the hive, making a double quilt. There are many other appliances pertaining to the house apiary that time will not permit to mention here.

The house apiary, on account of the uniform temperature that may be maintained, affords all the necessary conditions for wintering bees safely on a small consumption of food, without the labor, risk and anxiety of putting then in a cellar, or protecting them on out-door stands.

If at any time during the winter the weather is warm enough to let the bees have a fly, all you have to do is to *let them fly*. But if you don't wish them to leave the hive, go quietly into the apiary and drop a lump of ice into each of the 4 ice boxes in the corners of the room, up near the ceiling, and your bees will remain quiet.

For spring management of bees, the house apiary is of great advantage. By means of a boiler holding 5 or 6 gallons of water, heated with a kerosine lamp, at a very trifling expense, the temperature can be kept at 70 to 80 deg., and thus breeding promoted and continued, however sudden and severe the changes of weather. Protection against the extreme heat of summer is of little less importance than protection against cold, and there is no method by which it can be secured so perfectly and with so little expense as by the house apiary. It also offers superior facilities for observing and studying the economy of the hive.

To the amateur bee-keeper it is indispensible, and to the ladies it opens up a new aversion of healthful and remunerative employment.

Bee-keeping to be made profitable must be reduced to a system that will yield a regular average income through a term of years, that may be depended upon, as a means of support or source of wealth. Much has been said about the profits of bee-keeping, but it has never been demonstrated to the satisfaction of capitalists that it would be a perfectly safe investment even at 10 per cent. interest on capital invested, after paying expenses. Settle this point, and there are millions of capital in the country that would be invested in it without delay.

With a view to having this system thoroughly tested, I offer to put up "trial apiaries" in different parts of the country free of expense beyond the actual cost of material and labor, and as far as my means will permit, am ready to forward the interests of bee-keepers in this or any other way.

J. S. COE.

Montclair, N. J.

Surplus Honey.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

In procuring surplus honey there are three important facts not to be lost sight of, that may be laid down as correct:

I. Strong swarmes of bees.
II. Suitable hives.
III. Good foraging.

The two first are largely under our control, but the latter depends on the season and location.

It is not the largest number of swarms owned by the apiarist that always suits him best, but the greatest number of pounds of pure comb honey that he can turn into cash.

In raising and preserving strong swarms, four things are requisite: 1. Bees must be well wintered. 2. They must have plenty of food, honey and pollen in the spring season. 3. All the empty, good worker combs the queen and bees can occupy and cover. 4. The bees must be prevented from swarming. This, however, is sometimes one of the most difficult tasks of the apiary, yet it may be largely controlled.

To prevent swarming three thing must be strictly observed: 1. The hives must be well shaded. The heat of the sun drives them out of the boxes and hives, and they soon make preparations for swarming. And it often occurs where no previous preparations are made; after a few hours warm sun and a sultry atmosphere, they will swarm, leaving behind not the slightest trace of any previous preparation—no attempt to build a royal cell. 2. Hives must be well ventilated. Ventilation should not only be in front, but rear of the hive, as well as at the top. I now use four fly holes at the bottom of the hive, two in front and two in rear (*i. e.* one at each corner), and in addition, in very hot weather, prop the lid up at least one inch.

When bees become very numerous in the hive they will for necessity find some place to cluster, or be forced to swarm. There should be no lack of surplus box-room under similar circumstances, where they can cluster and store the fruits of their industry.

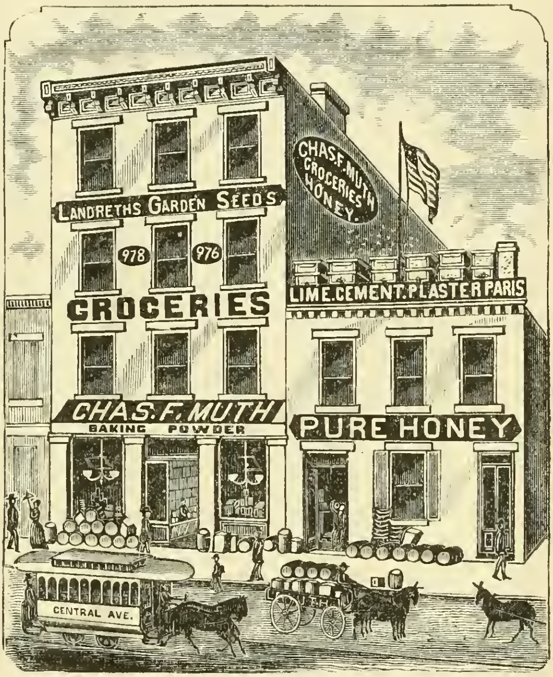
II. I shall say but little on the second part of the first proposition—on Suitable Hives. There has been so much written and money expended in procuring patents on hives, moth traps, etc., that every enterprising bee-keeper, however limited his experience, is prepossessed with his own idea of a hive. But at this stage of progressive bee-culture, none can be found worthy the name of an enterprising bee-master who will attach to his hive an appendage called a moth trap.

To avoid making criticisms I will only say what I like in a hive. And my preferences are in no way influenced by patent rights, manufacturing or sale of hives. I have not a dollar invested in that way. After an experience (and, I think close observation) of 20 years, I prefer a frame at least not over 7 in. in depth; 6 in. is preferable. I have used 5, 6, and 7 in. in depth and prefer 6 in. to any other; unless further experience should demonstrate, under some circumstance, 5 or 7 in. should have the preference. Every one should construct his hive to suit his own liking, oblong or square, the depth is the only thing under discussion, and one of most importance. I may be criticised here, on the wintering of bees in shallow frames, but of course my success has been satisfactory, or the shallow frame would not get the preference.

The wintering of bees in this latitude is "a trade in itself," and one of no little importance to the honey producer. In the use of shallow frames, the capacity of the hive is much greater for surplus honey. The dimensions of the first and second story should always be the same in length and breadth, so that the lid will fit both, and when the second story is off, the lid covers the first, which should be in early spring for the benefit of the young brood.

All honey boards were discarded in my apiary years ago, and I don't dream of adopting them again. Where comb honey is the object, every one can use his own box on the hive described.

My experience is, that bees build combs and store honey the fastest when kept in a large body; *e. g.*, put a strong swarm in a barrel, and as a general rule they will gather more honey, placing it in one large bulk, than if forced into several small apartments to deposit their stores. Now, taking advantage of this instinct of the bee, we are forced to the conclusion that the ingenuity of man must be equal to the emergency, and work bees in large bodies, and yet have the honey put up in small frames or sections of about 2 lbs. each, when divided and ready for the market.



APIARY OF C. F. MUTH, IN THE CITY OF CINCINNATI, OHIO.

III. As to good foraging we need only say it is altogether dependent on the season and locality.

The first indication throwing its light into the future of the coming year, is a damp, open winter, that not only lets live, but feeds the roots of all perennials, so they vegitate with vigor at the proper season of the year. Where the earth is covered most of the winter with her snowy mantle the results are the same. All honey-producing plants secrete most honey under the influence of a damp, warm atmosphere, and the earth in a moist condition. It has been claimed by some that buckwheat is a fine honey-producing plant, but others discard it. While under the foregoing conditions of the atmosphere and earth, it never fails, but when under the influence of a dry, heated atmosphere and parched earth, it is worthless.

Camargo, Ill. A. SALISBURY.

For the American Bee Journal.

City Bee-Keeping.

The principal reason for getting this cut made was to show our brethren an apiary in a city. I have had to describe it already dozens of times. The cut tells the story at once. Besides this front row of hives facing south and running east and west, there are three more rows running from south to north; 26 stands, all in Langstroth hives, constitute my apiary this fall. I had as many as 35. I consider bee-keeping my "hobby," and am prevented by my business from keeping as many stands as I otherwise would. They are attended to only in leisure hours, and my friends here will testify that I have not many leisure hours during the year. I have, at the same time, each one of my hives in as good order as any one. My average receipts per hive, this last season, was 181 lbs. of choice machine extracted honey. Having a surplus set of combs for each hive, my bees build no combs. I have had no natural swarm for the last nine years, and am of the opinion that bee-keeping does pay. CHAS. F. MUTH.

Cincinnati, O.

Progress in Bee-Culture.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

I have been watching friend Heddon's course for the past year with a good deal of interest, and as I have heard nothing of him lately, and everybody seems to be against him, I hope he has not been "bull-dozed" off the track; as I think he took a very proper "departure"; though perhaps he made a stronger case than many of us are willing to accept, and perhaps stronger than he means to accept himself. To make a cause in that direction, it is necessary to make it strong enough to arrest attention; but when he says that we are shifting pretty much the whole load from the bees on to our own shoulders, I feel like endorsing every word. Why, some even go so far as to say that they want to make the combs for the poor innocent bees; yes, and the honey, too. What will the poor bees do? Get lazy, of course, and die with gout and rheumatism and forty other diseases that their lazy owners are already subject to!

But look at it from a standpoint of dollars and cents, if you please. Mr. Doolittle says that the natural comb can be made for 50 cts. per ℔., and I think so too; that is for an apiarist to make all the white comb he needs to use in his own apiary for box honey; I don't think he could make it by the quantity at that price. There are many times in the season, when we can get comb built without costing a cent: only to put in and take out the frame. For instance, last spring, in May, when the hard maples were in bloom, I put an empty frame in each of my strong stocks, and they built a Langstroth frame full of drone comb within a week, and followed with eggs; there was hardly a drop of honey in any of it, and as stocks were all strong at that time, except one or two, it gave me a quantity of comb to start with. By a little management through the season, all the necessary comb can be made without lessening the crop of box-honey a particle.

As there are about twice as many square feet in a ℔. of natural comb, as in a lb. of artificial, it reduces the value of artificial to 25 cts. per lb., as compared with the natural. The natural comb has the cells already drawn out, and as the bees can deposit honey in the cells at once, they will commence work on them at once, thereby saving valuable time in the height of the season; which reduces the value of the artificial comb one-half, or again makes it worth only about 10 or 12c. per lb., as compared with the natural at 50c.

This calculation is based upon the supposition that the artificial comb foundation is just as good for the consumer as the natural, which no good judge of comb honey is willing to admit; hence when the facts are all in, there is no difficulty in showing that the artificial comb foundation is an actual damage, in the surplus department; or in other words, if the apiarian should have the artificial comb foundation furnished him for nothing, he would make money to melt it up and sell the wax, and use natural comb in place of it.

As to the actual damage that the artificial combs are to the apiarian, in the brood chamber, Mr. Burch is more competent to judge. I would ask: "What did the Almighty create bees for, if not to make comb?" If you are going to compete with the bees in making comb, you will want to import Chinese cheap labor, get machines furnished for nothing, and the wax thrown in, and then the bees will leave you behind. When my bees get so lazy that they can't make their own comb, I will brimstone the whole lot, and turn my attention to another business.

Of all the humbugs that have been imposed on the bee-keepers of this continent in times past, I consider artificial comb, fraught with more danger, and damage to the interests of bee-culture, than all the others combined; as it strikes a vital point, that of vitiating comb honey in our markets. In many cities, it is now impossible to sell pure extracted honey, to any extent, as consumers discovered that there was an artificial product in the market, put up in that form; and being incompetent to judge, they reject all of that class of goods. Now, when they find that comb honey has been tampered with, they will refuse to buy at all.

As to going back to box hives and black bees, it is a question for serious consideration, whether some of our best apiarists will not be doing that before long. It seems to me as though I was gravitating in that direction every year. I do but very little handling of brood comb now, to what I did formerly; and when we learn to control the swarming impulse, which I have no doubt we will eventually, either by breeding that instinct out of the race, or in some other way, then perhaps we can get along with very little handling; perhaps the box hive should be improved by putting in bars to facilitate the weeding out of drone comb, till we get the hive filled with worker comb, then let them become a fixture. In case of queenlessness (which is a rare occurrence, when we quit handling our bees) and the hive becomes too full of honey, drive out the bees and drive in a good, strong active stock, and let them carry up the honey into the boxes. In case of too much honey in the hives in the fall (which will never happen with black bees in a properly-constructed hive and properly boxed) cut the ends of a comb, in the centre, and draw it out with the bar, leaving the space empty till spring.

Again, the idea of killing queens, three years old, as advised my many leading bee writers, is another humbug of the first water. Neighbor Baird and myself have quit our killing of old queens. If we have a queen whose worker progeny are not good workers in boxes, she never lives to get old, we take off her head and try another. When we have one whose progeny are good workers, we never disturb that queen. Such bees know enough to supersede the old queen in the course of the season, without interfering with their business in the least; and they will have a better young queen there in the fall than anything we can raise and put in. After practising this plan for two years, we have yet to record the first instance of disastrous results to any stock from loss of old queen.

Here is the most important point of all:—for the apiarist to invariably breed queens that will produce good working bees. For instance, if my 40 stocks last season all had the same disposition to work and store honey, as 20 of the best, my average would have been 50 lbs. to the stock higher, making a difference of 2,000 lbs. in the yield from 40 stocks. I know of no way to gain this point by breeding from any stock we have at present. I am satisfied it cannot be done by breeding from the pure Italian; the purest and brightest of mine have generally been the lazy bees, the very ones to put their wax and honey where it is not wanted, instead of "putting it where it will do the most good," and they are the ones that do the most of the swarming and fooling around generally. Nor do I think that the pure blacks will fill the bill, unless we give up the point, and use them in box hives, or something near it, using more stocks in number to make a ton of honey. It is not the man that makes the most honey per stock that is the most successful, but he who makes the most honey for a day's work.

If we hybridise, shall we breed from the yellow mother, and fertilize with black or hybrid drones, keeping very close to the yellow race? or shall we breed from the black mother and fertilize with the yellow drones, then breed again from them by hybrid mothers, and so on? Who knows? I put a few black bees in my apiary last season, and shall try the latter plan, in all its devious ramifications, to see if I can bring about any better results.

To run bees in hives with immovable combs will knock the poetry all out of the business; but it is not poetry that the great mass of bee-keepers are after; dollars and cents are what they want. In the present state of bee literature, all the old, exploded ideas that come up in a new form, and all the new-fangled fixtures and implements, no matter how complicated, are counted as progress. I think it about time to stop and consider whether all these things contain the elements of true progress. If I rightly understand in what true progress consists, in this business, it is that we should simplify everything about it, and use as few implements as are absolutely necessary, and so arrange our plans and management as to produce the largest amount of honey for a day's work; as labor is the largest factor that enters into the product, and our aim should be to put a ton of honey on the market, in just as good or better shape but at a less cost, and then we need be in no hurry to put the price down in proportion; it will go down quite as fast as any will care to see it.

This business, compared with other agricultural pursuits, with me at least, stands the test pretty well; it has given me an income this year of $1,000 (after paying for lumber and glass) for my labor on 40 stocks of bees. I am a strong advocate of mixed husbandry, and as several other branches have partially failed with me this season, my honey crop helps me out very nicely. The market is somewhat depressed, it is true, but not near as badly as some other things that I am engaged in producing.

That the movable comb, the Italian bee, and the honey extractor, have had a large share in educating the modern bee-keeper up to his present high position in the science of bee-culture, I think we all (even Mr. Heddon) are willing to admit. That a man so educated can run an apiary of black bees, in properly constructed box-hives, with pecuniary success, I doubt not; but I don't see advantage enough in it to warrant me in making the change. I think I would rather wear out my hives as they are.

J. P. MOORE.

Apicultural Progress.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

Mr. President and Gentlemen: — At your last annual Convention the idea of telling others all that is known of bee-culture and letting the light of the Convention shine in all its dazzling effulgence, was set forth in a paper, and to my knowledge never reported. Now, Mr. President, none can fail to see that, in a missionary sense, the ground was well taken; how well the principle was maintained I have no means of knowing, but from the source from which it eminated no doubt it was well developed. I shall not at this time presume on an opinion whether such effort is advisable or not. But with your permission I will try to show how much light this or any other convention may cast in the dark and virgin corners of honey culture. It is not necessary for me to show how many bees I keep, or how long I have kept them; neither, whether they have been a source of profit to me—all these points I waive, as most of you have such facts—all that are necessary at least.

The first and most valuable contribution after Weeks, of Vermont, who I believe was the first to generally introduce a chamber or extra top cavity, containing surplus boxes, and who also wrote a book which perhaps more than any other early obtained circulation, with his hive, and gave an impulse and practical value to the honey-bee, as an adjunct to agriculture previously unknown. This hive and management created a demand for comb-honey in small packages, which has gone steadily forward, and is not yet abandoned in places when such is attainable.

Mr. M. Quinby comes forth as a contemporary of said Weeks, and puts his knowledge on paper and brings out a hive. The book was *patented*, the hive was NOT PATENTABLE. The hive was used to sell the book, and the book was used to sell the hive! All that was common in apiculture was gathered up and put in said "Mysteries of Bee-Keeping," and some probable opinions expressed. Making the title truthful at least—that is, establishing the theory that bee-keeping was a mystery. In this book all that was practical and of value to the bee-keeper under the prevailing system, was well eliminated; and bee-keeping as a source of profit went steadily forward. In fact it rose to a high degree of perfection, in a remunerative sense, and promised more than we have realized.

At this time several inventions using the knowledge gained from the above works, and numerous experiments appeared in "Dividing Hives and Methods of Artificial Increase," and as has since been the case—great results were promised. How great these results might have been, no one can determine, as they were cut short by the introduction of the Langstroth hive and his book—"The Hive and Honey-Bee."

In this case the hive was patented as was also the book. Sharp, shrewd men clutched at the principle, and hives multiplied; each one having a *patent book* and some devise also patented, and the words "patent movable-comb hive," in bold letters appeared below the happy inventor's name—with dates in rapid succession.

As in the case of the sewing machine—men of more business tact than the real inventor, built up a trade, stimulated the visionary and made money, while the real inventor cast about for a man who could run the elephant. One such was found—"chock full of force," not too scrupulous to be successful, but well adapted to the business. His name was Roswell C. Otis. This man worked the machine, brought suit against alleged infringers, sold territory to suit purchasers, advanced the interests of Mr. Langstroth, and helped work up a frenzy for bee-keeping.

As an adjunct to this apparent success the much advertised Italian "B" came to light—beautiful, gentle, prolific—the very bee for which honey was invented. "Oh, Lord, how mysterious are thy ways; how past finding out thy oracles."

About this time the Rebellion broke out, the supply of sugar was cut off; naptha took the place of turpentine; coal oil the place of the whale; our commerce was jeopardized; paper money took the place of coin, and prices ran up. Men grew rich, and fast and honest (?); no luxury was too expensive, no show too great for a nation so mighty! The old times were gone—2.40 was the minimum speed of a horse; 2.16 a reasonable and permanent gait (!).

About this time it was reported that Hruska had invented a machine which would remove the honey from the combs without their destruction; but from some cause the Patent Office heard of it first. Mr. Langstroth tried to get up a patent extractor, but it would not patent so as to be a monopoly, and he would not enter the field unless it was essentially clear. So the extractor became common property.

With all this past record, and the machinery at hand, the field seemed to broaden; fortune not often obtained, seemed in the near future. There was a market for honey of any kind. There was a large and growing market for bees, queens, hives and apiarian supplies—"Send stamp for circular"—"Advice to Bee-Keepers free." All this with doors wide open for inventions. No prosperity so great that a greater is not hoped for. Bee papers and pamphlets multiplied. The price of honesty rose as the supply diminished, and we were ushered into a *realm* of wonderful activity. Queens and bees could not be raised fast enough; new appliances to hasten and perfect the impregnation of queens were *invented* by the sacreligious, and every one seemed to chuckle over the idea that, for once at least, the Lord had failed and man with consumate skill and generosity had come to the rescue. Manure heaps were used to hatch and mature bees, and queen nurseries were brought into requisition. Oh, progress! What, in thy lofty name, has not been done!

One thing allow me to say, Mr. President, has not been done, neither is it likely to be done at present. Nothing has been written in any of the journals, or brought out in any convention which has added a single fact of any value to the works above referred to. He who has mastered "Langstroth on the Hive and Honey Bee," and Quinby's Mysteries," has all that has ever been said or written in this country on the subject, that is of any practical value. The journals at the present time, are turned over to maiden essays from enthusiastic novices, who as fast as their capacity enlarges so as to comprehend the above authors in part, write their views and experiences; especially is this true when in their immediate vicinity comes a shower of honey and their well manipulated bees come off with honor. The success in Wisconsin a few years ago, and in New York State in 1873, and many other places, I might mention as illustrations in point.

Nothing strikes one more forcibly in a convention than the fact, that every one knows just what every other person knows. The only difference being in the manner of telling it. He who doubts this may ask:—"What has Mr. Grimm to say?" "What has Mr. Hetherington said and written?" "What is Mr. Harbison writing and saying to-day?" The answer is, they have nothing new of value to say.

A convention used to be a place to advertise hives, queens, bottles, extractors, knives, and, last but not least, one's self. While it would seem that so much discussion ought to have in some way advanced the interests of bee-keepers, a casual glance at the past will convince any one that all the theories, bright hopes and discoveries have melted and resolved themselves into thin air, under the only test whereby truth alone is left—*the test of experiment.*

Mr. President and gentlemen:—By what I have said do not understand that I am opposed to conventions or journals, for I am not, but on the contrary I am in favor of them. Not, however, for the good or ill they may have done in the interest of honey-culture, but in a *social sense.* In that sense I prize them and prize them highly. Should not be willing to do without at least one paper, neither without the Michigan Convention.

I well remember when bee conventions were new. Those days were full of hope and strife; no feature of the business was left undisturbed. The president and officers were all interested in some salable feature connected directly, or indirectly, with the honey interest. Hives, queens, in fact everything but the production of honey, had its zealous exponent. Conventions endorsed hives, queens and vendors of them, but rarely spoke of honey, except as a kind of dead issue to beguile the innocent producer and smooth his lonely way.

Mr. President, those days are over with us. We come here not to endorse any hive, bee, or plan of management; nor to advise others what they should buy or what they should sell; but we come here to meet one another, to sympathise with and encourage the unfortunate (and they are most of us); to talk over our hopes and fears, and go away feeling that we are not only acquaintances but friends, whom mutual sorrow and disappointment, aye, perchance success, hath bound together.

Abronia, Mich. T. F. Bingham.

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Wooster, Ohio, Dec. 2, 1876.—"The honey season is over, and the 'little pets' are now in winter quarters. From 19 colonies I got 500 lbs. of box honey and 400 lbs. of extracted. I could give them no care, on account of my malady. I have sold down to 10 colonies. 15,000 lbs. of honey was sold in Wooster this year; never more than 3,000 lbs. was sold here before. Box honey sold at 20c.; also good extracted at same price."

D. H. Ogden.

Surplus Honey.

READ BEEORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

The best method of obtaining surplus honey is probably yet unknown, but my experience is that I can get it better in small frames of from 1 to 4 lbs., than in any other way, and sell it too, for that matter; for we need offer only the nicest for sale, using the others, after extracting, as guides again. The best supers I have ever used are boxes without top or bottom, sitting directly on the ends of the frames below; the frames of all to hang on the upper edge of hive and boxes. These edges are made sharp by having frames touch each other at the ends for about 1¼ inch, and open between. We can put on another super, over or under, can make all tight with quilts, pieces of wood or leave open for ventilation. There should be a space of ⅜ inch between upper and lower frames. The super should cover the hive completely and contain one or two division boards so that we can make the space large or small to suit circumstances, and directly over the brood nest. I have had three supers filled the past season on one hive; they were all kept on till Sept.; their weight is 140 lbs. It is necessary to have at least one guide-comb, reaching down to stepping distance, for the bees to climb up on; put this over the brood nest. My hives are 2 ft. long, 1 ft. wide, and 10½ in. deep. My supers, 6 in. deep and covering the hive.

Ventilation has a good deal to do with surplus honey, especially box honey. Give plenty of ventilation, above as well as below, in very hot weather. But we should have strong colonies for comb honey, and keep them so. With black bees and my arrangement, I think there would be but few swarms to hinder. But I use those broad-banded, light colored Italians, and when they swarm, the queen drops on the grass; I pick her up in a cage; put her on the frames and let the bees return; then in the afternoon proceed to make a swarm, with this caged queen, from her own hive (but make it very small to save the queen) and the hive is still strong.

Now, in my experience this hive works better than if we left the queen* and cut off queen cells, for the bees work right along, but will fill the cells from which young bees hatch, until a young queen hatches; piping will then be heard. If the harvest is rather scant† we must either cut off all but one of those cells, before piping is heard, or having heard it, take away every piping queen and leave a younger queen or cell. Then all will go on smoothly, and the filling of boxes will proceed.

As soon as the queen is accepted, and there are no rivals, the bees will unload the brood cells (for the expected eggs of their new queen) and carry the honey above to the supers; and if there is a chance, will clear a space as large as they need. This is just my experience with my yellow Alpine bees and small frames and supers.

Delhi, Mich. J. L. DAVIS.

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* There is an opposition to the old queen and they will sometimes kill her; she will not lay much better; take her away.

† In a full harvest they generally allow the first hatched queen to kill the others.

For the American Bee Journal.

Answer to J. C. Newman.

The idea of preventing increase as given in the A. B. J., Nov., 1876! W. keeps his queens' wings clipped. I do not; the idea is new to me; will try it next season. I will answer you by giving the process again.

Prevent increase all we can by giving shade and plenty of surplus room. When they do swarm, turn the old hive so that the swarm will not enter it, but go into the new hive, which place close to the old one. You can give the swarm a comb from the old hive or not. After the swarm has got nicely to work and are satisfied, remove their empty frames with the starts they have made, which will do for other hives or for surplus boxes, and give them—the swarm—the contents of the old hive, viz: combs, bees, surplus boxes (minus queen cells), and remove old hive; which keep for another swarm. J. W. says they will go ahead and finish up boxes, and work as though nothing had happened. It is a little trouble, but tell us a better way?

D. D. PALMER.

For the American Bee Journal.

Comb Foundations.

MR. NEWMAN:—In the Jan. number of the A. B. J., I see a couple of articles saying bees do not thin down and lengthen out cells in foundation comb. I disagree with the gentlemen, as I have specimens in my hives, where, on a single strip 3 in. wide, I have natural foundation as inserted, cells complete and capped cells partly built, and cells *thinned down*, so that they resemble tissue paper for thinness, and it plainly shows where the bees quit thinning and lengthening out cells. This is from foundation you sent me last summer.

The only fault I find is, it sags down in hot weather, making oval cells; and on the upper edge bees refuse to work on it where it has so stretched, except on *one side*, making crooked, irregular combs. I do not think it is pure beeswax.

This is a hard winter here for bees, and I think many will lose their stocks. Mine are all right yet, and throw off a great deal of moisture. I do not believe in cellar wintering, unless especially fitted up for the purpose. I am wintering in my workshop, packing hives in straw and chaff, without a fire in the building. C. F. GREENING.

For the American Bee Journal.

Guide Combs.

"Which are the best guides in the brood chamber?" is a question often asked. Bees will build on sharp edges of wood, well enough; and will build straight enough, but that is not all there is of it; we want straight worker comb. Bees, if left to themselves, build store combs at the top, in the corners and on the sides of square frames, no matter what guides are used; and it may be small or worker cells, and still not be fit to breed in on account of not being horizontal. What we want is regular brood combs throughout the frame, at will; in fact in all of the frames in the brood chamber. I will state how I get it.

I take straight pieces of brood comb, 2 or 3 inches in width; this I fasten to the top-bar and end pieces with melted wax. I would do this even if I had to cut off the pieces from combs already built; comb foundation will not answer. The bees will raise the parts mentioned into store combs, the same as if they had built it themselves. But if we put brood comb in those places, they will fill the frames at times with brood, and store their honey above, if room is given. If small swarms only are allowed to build, we shall have very nice combs; strong ones should be allowed to build only for surplus. J. L. DAVIS.

Ingham Co., Mich., Jan. 10, 1877.

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For the American Bee Journal.

About Honey.

Last winter I saw an article in the New York *Tribune*, copied from an English paper, about an empty honey box. The writer stated that he was in Boston and saw some 3-lb. boxes of honey, marked "Vermont white clover honey." He purchased an empty box for a model to make some by. When he arrived home he took his knife and scraped from the inside the box a little wax and honey to see how it tasted. He made up his mind that Vermont white clover honey was nothing more than sugar fed the bees and then sold for white clover honey. He took that occasion to "rake down" American bee-keepers generally.

What a pity it was that such a man could not have been appointed one of the judges at our Centennial. There he might have had an opportunity to address the National Bee-Keepers' Convention, and he would not have been long in finding out that he is not much of a judge of American honey. I happen to know the man who sold that honey in Boston, and I can say that a more honest man cannot be found in the State of Vermont. He had better try the experiment of feeding sugar to bees and see how well it will pay. I have tried to make my bees fill out a few cells in boxes that were nearly full, by feeding them; but I had to give them 10 lbs. to make them put 1 lb. in the boxes. I could never make out what they did with what I fed them for the above purpose.

Some years ago a man from the State of N. H., canvassed this county with a patent bee hive. He explained how it worked, and said that the bees would work all winter in his hive, and that for every lb. of sugar fed them, the bees would "make" 2 lbs. of honey, and that, too, in the winter. And strange to say he found many who took stock in what he said, and purchased his hive and right to use. I never saw the man but have seen his hives and heard his victims talk. That was before bee journals were printed.

I have several times purchased small lots of California honey to test the flavor of it, but the flavor I never found. It has the same taste to me that granulated sugar has after the bees have put it into the comb and sealed it. Of course it was not sugar but it was no better. Vermont white clover honey is of an excellent flavor and quality, and very light-colored, but that is not as good as honey from Aroostook Co., Maine. I never saw honey so light-colored and finely flavored. But those men in that county will persist in using 8 and 10 lb. boxes. If the A. B. J. could be circulated more freely down in that wild country, I think they would soon use such boxes as have been described in the JOURNAL during the past 10 years. They could make even a better show than our friend Harbison did at the Centennial. That seems almost impossible. The honey could not be put up in better style than Mr. H. did his, but the honey is much better and they could beat Mr. H. on the quality and color alone. About 500 lbs. of Aroostook Co. honey arrived in Boston in November, and all in large boxes.

Honey gathered near the sea-shore is very dark-colored, and in a wet season, of a poor quality. I exhibited some of my honey at our county fair, some 10 years ago. The judges said that they could not award me a premium, as they did not think that my honey was the pure article. I replied that I cared nothing about a premium but that I wanted them to understand that the honey was pure and was gathered from white clover blossoms by the bees. When the report appeared in print, I found that they had awarded me a "gratuity."

The fact is, not one bee-keeper in fifty is a good judge of honey; and not one man in ten thousand can tell impure honey from the *pure* article. I have prepared food for my bees by mixing honey and sugar syrup, that was much better than honey stored here some seasons. H. ALLEY.

Wenham, Mass., Dec. 18, 1876.

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For the American Bee Journal.

Prevention of After-swarming.

In order to increase as little as possible, I relied during the last season on natural swarming, and removed all queen cells but one in the mother hive, about 5 or 6 days after the swarming. Sometimes I found a young queen dead in her cell, which made me very careful in picking out the largest and healthiest cell to be developed. One instance, however, made me change my method. When I had removed in one hive all but two of the queen cells (those being the largest, and to all appearances, the healthiest ones), I selected one at random, not being able to find a preference; and after cutting out and opening it I fonnd two dead, full-grown worker bees in the cell. Then the thought struck me that if perchance I had removed the other cell, I would have either lost the hive or it would have become much weakened before discovering its queenlessness.

Since then, I wait until I hear the piping of the young queen, which is now my signal for at once removing all queen cells, being sure of a queen then. The watching of the hives is easily done. Listening each morning and evening for 1 or 2 minutes, during 3 or 4 days, always brings me the piping. I find this method of advantage in another respect. It happened several times that the young queens slipped out while I held the "cut out" cells in my hand, and all live ones come out if kept warm. I think they can be successfully used in forming nuclei hives. Not having an observation hive yet, I made one for one frame, glass on both sides, hung in it a nice honey comb containing brood, took a honey box just full of bees which were breeding, and put it over the nucleus hive, an inch hole connecting both nucleus hive and honey box. Put the whole into a dark chamber for two days. Meanwhile I had preserved one of those slipped-out young queens, put her into a common feeding box, together with a little honey and a few bees and drones from the same hive that the honey box was taken from. After two days I found that the bees had all descended to the honey comb in the nucleus hive. After closing the inch hole in the feeding box with a thin sheet of beeswax, I removed the now empty honey box and put the feeding box with the virgin queen in its place, and put the whole back into the dark room. Not ten minutes after the bees made a noise that could be heard all over the house. Getting afraid of my experiment, I entered the dark closet and found the upper box in which the queen was, "chock full" of bees. They had cut through the wax in less than 15 minutes. Next day I saw the queen walking in her becoming way on the comb. and this nucleus is now a strong hive. Next season I shall follow this plan on an enlarged scale.

Sigel, Ill., Dec. 4, 1876. CH. SONNE.

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For the American Bee Journal.

The Michigan B. K. Association.

HIVES IN ROWS.—I have kept my hives in rows fronting south for 18 years The hives stand at irregular distances, from 18 in. to 3 ft. apart, in the row; and the rows are parallel, 6 ft. apart. No two hives painted the same color stand side by side in a row; the fronts are also diversified that no queen returning from her bridal tour can mistake her own hive. Consequently my loss of queens has been very slight, and mainly confined to winter. A few are killed during queen rearing, by birds and toads. I have, to a great extent, if not entirely, remedied the winter loss of queens by replacing all queens two years old, every fall with choice queens reared from natural cells—cells from choice hives that swarmed naturally. Some choice, imported queens I allow to live 3 years. If I had plenty of space, my rows of hives should be 4 ft. apart in the row, and the rows 8 ft. apart.

BOX *vs.* FRAME HIVES.—We all have our theories how we would manage for box-honey, but few of us are graduates from "Experience University." I do not claim to be a graduate, but I do claim considerable experience with both box and frame-hive cap honey, black and Italian bees. Before I used the frame, and 2 years after, I used a box-hive 12 in. square and 15 in. deep, with 8 bars, 1½ in. space to each bar, which was 1x¼ in. thick. These bars had guide combs and were always built as straight as an arrow. I frequently had eight 6-lb. caps on a hive at a time, all filled. The only objection to these hives was the difficulty of preventing swarming; besides this I had found that I could prevent swarming with the frame hive, and at the same time get as much cap honey as with the box-hive, designed for cap honey. I had the care of a small number of Langstroth hives, 3 miles off, and as they were run mainly for cap-honey, I never opened one of them after the bees were put in. All the care I had, was to put on and take off caps. These hives did as well as any box-hives I had ever known, nor have they ever lost a queen during those several years. If I were raising my bees for box honey alone, I would not give up the frame hive; as the trouble to manipulate in case a stand gets wrong is too great with box hives; besides I cannot equalize my bees that way. As to using small frames instead of boxes, I prefer the boxes, owing to the trouble of getting the bees to build straight in the frames. I prefer running my bees for extracted honey, because I can now sell at home 100 lbs. of extracted to 10 lbs. of comb, even at the same price—20 cts. So will all other bee-keepers when people are fully satisfied that they are buying the *pure* article.

LAYING OUT OF BEES.—In certain cases bees will hang out, even in a flow of honey; though it is not common with Italians. If there is no honey to gather, it cannot be helped; but while the flowers are yielding honey it is in the power of any skilful apiarist to prevent bees hanging out. I never allow my bees to hang out a single day while there is a flow of honey; but when I first commenced with the frame hive, in 1866, I did not know how to prevent it, and was compelled to let them hang out in large clusters, until they would swarm, and that for weeks at a time, and in a good yield of honey. In that year I had one box-hive that commenced work in caps about May 20th, and commenced hanging out to swarm about the 25th; I added a cap, after raising the first ones and slipping others under, till I had caps on enough to hold about 75 lbs. All other stands swarmed, but this one persisted in hanging out till June 13, at 2 o'clock; when a very large swarm came out, leaving nearly all the caps filled. They had hung out to the last, and in such a large cluster during the last week, as to half cover the hive. All other stands were gathering honey rapidly at the time; and to prove that they never hung out for want of honey to gather, they filled their hive with new comb and honey in two weeks after swarming. Now, had these been in a frame hive and had I understood how to manage them, I might have saved about 100 lbs. of honey. My patience had worn out waiting on them so long, so I had been all the morning of the 13th till 2 o'clock, making preparations for the Herculian task of swarming them myself—a thing I can now do in from 5 to 10 minutes.

A few years ago a gentleman looking at my bees, so hard at work, remarked that he wished his bees would swarm and go to work, saying they had been laying out two weeks doing nothing; he thought there was no honey to gather, or they were waiting to swarm. I told him I could send them to the field in 24 hours, whether I swarmed them or not. I went to his house that evening, and sure enough they were black bees in box and gum hives, and every one laying out in very large clusters. I raised the hives at once on ½ in. blocks, cleaned away the rubbish from the bottom boards, took off the caps and found the holes stopped up with cobs, and the bees had no way to get into them. I raised their bottom boards 6 in. above the ground—they were flat on the ground and full of vermin. Next day there was no cluster outside, all was right after that.

Bees never hang out without cause, and the causes are many and various. In this case the cause was, they had filled every space insides the hives, and were unable to get into the caps. Why then did they not swarm? I am unable to say, but will say to friends Bingham and Heddon, that if they had been Italians or hybrids, or had even an infusion of Italian blood, they would either have swarmed or built comb outside of the hive. These were the most gentle bees I ever saw, and must have been some that had lost all their vitality by long in-and-in breeding. If, as many writers say, including Langstroth, the cause of so much loss of bees by dysentery, wintering, etc., is attributed to their losing their vitality by too long in-and-in breeding, then my bees must be very healthy, from the fact that losses in wintering is comparatively nothing, and no disease has ever been in my apiary.

I have taken up enough space without half finishing my remarks. I may continue in the next number. R. M. Argo.

Lowell, Ky., Jan. 5, 1877.

For the American Bee Journal.

The Kalamazoo Convention.

The report of the Ninth Annual Session of the Michigan B. K. Association, published in the January number of the Journal, has no doubt been perused by a majority of its readers. In order to have it reach Chicago in time for the January number, we were compelled to entirely omit some things and only glance at others that were worthy of attention; and having a little leisure to-day, will indite a few thoughts as being additional to, or explanatory of, the report.

Some of our readers may have noticed a discrepancy between the report and the notices we sent out giving the time and place of meeting. The notice published in The American Bee Journal gave it as the *tenth* annual session, but this was a mistake of our own, as it should have read "the *ninth* annual session, etc." While Michigan has the honor of claiming the oldest, existing State Association of American apiculturists, we have no desire to claim more of years or usefulness than we are justly entitled to.

As will be seen by the report, the subject of box-hives attracted considerable attention from those present. The fact that a hive without frames should find favor with such practical apiarists as Mr. T. F. Bingham and James Heddon is certainly an indication that they *may* possess certain desirable qualities,which we, in our modern "improvements," may have entirely overlooked. There surely can be no harm in a little careful investigation in this direction, even if it should lead backward instead of "onward and upward;" and if we find that we have been going "too fast," let us frankly acknowledge as much. The hive Mr. Bingham is using has been very properly styled "a box-hive," and we all know him to be one of our best practical apiarists.

Mr. Heddon, in answer to a question as to what he could accomplish in the way of manipulation with a box-hive, replied: "all that any of you will do with movable frames;" and we think that no one who has ever visited "Michigan Apiary" will doubt his ability to do it. Without any prediction relative to the future *status* of the box-hive, we think a little scrutiny will reveal the fact that a hive divested of much that we are pleased to denominate "improvement" may still be found to *practically* subserve all our wants in the apiary. This of course, has reference only to those apiculturists who think they have little use for a "honey-slinger," and have too much work to do during the honey season, to admit of what might be very properly styled "fancy bee-keeping."

Among the hives on exhibition was one by a Mr. Hatfield, of Indiana, an improved box-hive, designed to facilitate the manipulation of honey-boxes, and increase the amount of surplus. It received considerable attention and elicted many comments.

Dr. W. B. Southard, of Kalamazoo, exhibited some specimens of box-honey that were indeed very beautiful. His experience with both boxes and frames for comb honey has resulted in giving a decided preference to the former for profit, which exactly agrees with our own experience. As will be seen by the report, the test questions submitted to the Convention, resulted in several cases in very nearly an equal division of opinion of those present.

Mr. T. F. Bingham, of Abronia, had on exhibition two different styles of "bee-smokers." which were unhesitatingly recommended to all who wish an instrument that will give good practical satisfaction. They are made strong, and will burn seasoned maple wood. He has two styles, but we prefer the "bellows" pattern.

The reading of Prof. Cook's paper on "Mistakes of Bee-Keepers" elicted considerable discussion relative to the value of honey plants as a source of honey supply. He gave in detail the experiments made in this direction at the State Agricultural College at Lansing, which gives promise of much value to those who are making apiculture a specialty.

We set out with the intention of giving a pen picture of some of the names that have become so indissolubly associated with our Michigan Convention in the public mind, but find it must be deferred for the present. At some future period we may be able to gratify public curiosity in this regard.

Herbert A. Burch.

South Haven, Mich., Jan. 13, 1877.

For the American Bee Journal.

My Annual Report.

Last spring I sold about one-half of my bees for $150. I started the season with 23 stocks (5 were weak); increased to 39, mostly by artificial means. I got 800 lbs. of box honey, which I sold at 21½c. per ℔. The early spring was favorable till fruit bloom; after that the weather was cool. White clover bloom was excellent, and lasted six weeks. Then there was a scarcity till Aug. 20, and a meager supply till Sept. 4, when it became cold, and remained so till frost on Sept. 26. Some colonies that had just started to work in boxes, drew out the honey, but the best colonies gathered a living and secured a supply for winter.

My crop was cut short by the bad weather at least 500 lbs., but my bees will show as large a per cent. profit as anything on my farm, this year.

I put 10 stocks in the cellar, Dec. 1st; the rest are on their summer stands, shielded by a tight board fence and packed in hay. This is my first trial of cellar wintering.

Watseka, Ill. T. N. Marquis.

Bees at the Agricultural College.

AGRICULTURAL COLLEGE, Lansing,
Michigan, Dec. 15, 1876.

To the President of the Faculty:

I respectfully submit the following report detailing the methods of preparing bees for the winter:

Thirteen of the colonies have been put into the apiary cellar, where it is expected that they will be kept in a nearly uniform temperature at about 40 deg. The cellar is very dry, dark, and quiet, while the ventilation is all that could be desired.

Three colonies were buried. A hole was dug in a side hill, where the soil was of light sand, some straw was put in the bottom, and when the hives were set in, they nearly filled the hole; their tops reaching the general surface level of the ground. A mound of straw was then laid on the hives, which was covered with about 4 inches of earth. A second layer of straw was then added, which was also covered as before. At the very apex of the cone there was left projecting a twist of straw, 3 inches in diameter which, though uncovered with earth, was so protected with a board, as to keep the straw dry. Close about the base of the mound a trench was dug, which opened on the down-hill side. During the severe weather of the last few days, when the mercury has gone 19 deg., F., below zero, a load of manure has been added to the mound.

The three remaining colonies were protected as follows: About the hives, except on the front which faces the east, boards were placed, leaving a space of one foot between them and the hive. These board walls reach one foot above the hives; the enclosed space was then closely filled with straw, which also covered the hives for one foot. Two of these were then closely covered with boards, that the straw might be kept dry, while the third was left open at the top, so that the straw would become wet and frozen.

All the colonies in the apiary had young prolific queens, and contained brood in October. The colonies were all examined for the last time in October, when all uncapped honey was thrown from the combs, and each colony provided with 80 pounds, by weight, of good capped honey. This took 8 or 9 frames. The frames having the most empty cells were placed in the centre, and all the combs contained a central opening about ¾ inch in diameter. A portion of the hives were given bee-bread, while the others were left destitute.

At the end of the space occupied by combs, towards the back of the hives, a division board was inserted, so that each colony occupies a space of about one cubic foot.

Above the frames a quilt was placed, which hung over the division board. Still above the quilts a sack was placed, made of coarse, unbleached factory and filled with chaff, so that it much resembles a common pillow.

The burying of hives is purely experimental. There is a strong probability that with just the proper ajustment of earth, straw, etc., this would be a very successful method, which, if reliable, would possess the merit of being convenient and practicable in all places, and for all.

A. J. COOK.

The North Mo. B. K. Association

Met at Mexico, Mo., Nov. 8, 1876. Hugh Hamilton, President, in the chair; Dr. French, Secretary. After reading the minutes, the Sec'y read the report of the Committee on Constitution, which was adopted, as were also the by-laws.

The following were elected members of the Association:—D. H. Chase, of Mexico; John M. S. Smith, of Auxvasse Station, Callaway Co.; Joseph Coons, of Mexico; Dr. Wesley Humphrey, of Mexico; George Stopher, Benton City; John Hoffisis, Benton City; B. F. James, L. B. Cudworth and W. B. Wright.

The chair appointed Messrs. P. P. Collier, R. L. Davis and D. H. Chase as committee to select questions for debate at the evening meeting.

Communications from Dr. N. P. Allen, of Smith's Grove, Ky., and P. P. Collier, were read and ordered to be published with the minutes.

The committee on questions brought in the following:

1. What are the advantages of the movable frame hive?
2. What is the advantage of the Italian bee over the common black bee?
3. What is the best hive for all purposes?
4. Does extracting pay?
5. What is the best mode to secure the greatest amount of worker comb?

The first question then being taken up, P. P. Collier said the advantages were numerous. 1. Movable frames were essential in cleaning the hives from both moth and filth, that could not be done in the old box-hives. 2. It was absolutely necessary in making artificial swarms; that with the movable frames you could take a card or two from one hive, some from another, with bees adhering, place in your new hive, refill space in old hive with new frame and you would soon have a strong stand of bees. With 10 strong stands of bees in Langstroth hives with extra comb, he could make a new and strong stand of bees every day during a good harvest, but without the extra comb, he could not increase so fast, as it required about 7 times as long to construct the comb as it would to fill the comb with honey. 3. That the movable frame was indispensable both in brood nest and honey chamber; that it was necessary frequently to extract from brood nest, thereby giving the queen room to deposit her eggs and to extract the honey from the combs, return the cards to the bees to be soon refilled, which could not be done in box hives.

The second question was then taken up. Judge S. M. Edwards said he had three Italian stands; had no experience with the blacks; got 40 lbs. box-honey from each, and believed the Italian to be more prolific, hardier, and better workers—could work on many flowers that the blacks could not. Get pure, fertilized queens and you have a much better bee than the mixed.

President—Queens are fertilized in the air, and when there were black drones, it was hard to get or keep pure Italians.

Mr. Edwards—In raising queens in black colonies they are more liable to meet with black drones than those raised in Italian stocks.

President—My Italian bees would do better in dry weather than the blacks or hybrids.

The question was asked: Would not the Italians rob the blacks?

President—My experience was that they would rob no more than other bees; sometimes robbing would occur, and in that case the Italians were more able to defend themselves.

The question was asked: Which is the best hive?

A. A. Collier—Mr. Quinby preferred the shallow frame, by having the frame 8½x18 in., the comb guide was longer and insured straighter combs.

President—The weight of the bees in constructing the combs frequently stretched the comb. The Langstroth hive was the best to secure the most box honey, and he believed it the best for all purposes.

Mr. Davis—Bees would build straight combs if the hives were set level. He preferred shallow frames.

A. A. Collier explained the comb guide.

P. P. Collier—To secure straight comb, remove every other sheet and insert an empty frame in its place, the combs on each side will serve as a guide. By this means he secured 49 full sheets of straight comb from 3 hives, the past season, besides 460 lbs. of extracted honey. He preferred the Langstroth hive for all purposes.

President—In swarming time bees would build drone comb.

Mr. Davis—My black bees have done much better than my Italians.

Mr. Smith—Have hybrids and blacks, but the hybrids were in better condition.

Mr. Davis—Had a swarm of blacks come off in July, got 80 lbs. of box honey.

A. A. Collier—Italian bees gathered honey from red clover.

Mr. Edwards—Had never seen bees working on red clover.

Mr. James—Doubted very much the truth of impregnation on the wing; believed they were fertilized in the hive. He kept bees on the old-fogy style—in nail kegs, barrels, etc.—and believed he had some experience in "bee-keeping." He wanted questions that would interest "scientific" men.

Mr. Edwards—Did too, for the benefit of Mr. James, as he kept his bees in kegs, etc.

Mr. James—Had not learned anything from the discussions. At the next meeting he would introduce and prove that the bee never went to flowers of any description, or under any circumstance, to gather honey or nectar; that bees gathered honey as it passes through the air, as flowers gather it; that the bee only went to the flower for its own living, etc. It was a startling announcement, but he would prove it.

He was requested to present his questions at the next meeting.

Mr. Edwards moved an adjournment to meet at Mexico, Mo., on the first Wednesday in May, 1877, which was carried.

P. P. COLLIER, *Sec.*

H. HAMILTON, *Pres.*

The Science of Bee-Keeping.

READ BEFORE THE MO. B.K. ASSOCIATION.

The objects of this Association are to advance the science of bee-culture, associating in a body those who are interested in it. The importance of associations, when there are common objects to carry out, will be readily conceded. The advantages to be derived from associations where matters in which all are interested, and especially where there is room for differences of opinions, cannot be over estimated. He who undertakes to carry out, solitary and alone, what he is aiming to accomplish when there are others equally anxious to succeed in the same direction, with whom he can consult and co-operate, is as a straw before the wind.

We have agricultural societies, granges and others to look after the great fundamental industries of our country. Conventions are being held all over this broad land in order to further the ends for which they were organized.

There is no class of men whose interest calls louder for consultation and association than bee-keepers. When we consider the fact that bee-culture is both a science and an art, that but few have any knowledge of the great discoveries or inventions that have been made, that the mass of bee owners are ignorant of even the simplest operations of the apiary, it behooves us to do all in our power to impart that knowledge by which we may prosecute bee-culture successfully.

While we believe the fundamental principles of apiculture have been laid, much is yet to learn.

With the movable-frame hive, the extractor, the Italian bee, nothing is wanting but a thorough knowledge of bee-culture and a determination to succeed.

Determined men in all the Northern States are producing tons of honey, realizing profits, and growing rich from the toil of the honey bee; and why not we? Our honey-producing plants are numerous; our broad acres are rich with sweets. All that is necessary to furnish our tables with this delicious food is an effort.

Honey, as food for man, was of sufficient importance to be recorded in the sacred writings. "Sampson enjoyed a rich feast of honey." John the Baptist lived on locusts and honey.

It is a fact that if man is to have honey, the bee must gather it, and it is very certain that the amount gathered is insignificant compared with the amount that might be gathered if there were bees to gather it. Do not think me exaggerating, when I say that it is my opinion that enough honey is available in Audrain or Callaway counties to give every housekeeper in Missouri 100 lbs. of pure honey.

"Out of 40,000,000 people in the U. S. about 70,000 are bee-keepers, and they send to market 15,000,000 lbs. of honey and wax yearly, representing in value $3,676,763 for the former, and $189,388 for the latter."

"Will it pay?" is a question that interests most persons, in all pursuits of life. I answer, bee-keeping is like all other pursuits—has its successes and its failures—but no more subject to failure than others.

I am fully aware that many who have bees fail to realize profit from them; but there is no reason why they should not. If they were to give their farm stock no more attention than they do their bees, they would prove the most worthless of the two. There is no reason why our land should not flow with milk and honey. Tons of honey could be produced where only pounds are now made.

It does not take long to learn to swarm bees artificially, thereby increasing stocks rapidly, nor to Italianize black bees, thereby cultivating a superior race, that are more prolific, better workers, and better honey gatherers. We can learn to extract the rich fluid, and return the comb to be refilled, in a few days, with all the manœuvers pertaining the apiary. But to derive any benefit, movable-frame hives must be used. I would recommend the Langstroth; transfer your bees, procure an extractor, and take The American Bee Journal.

It is said that he who causes two blades of grass to grow where only one grew before, is a public benefactor; and it is none the less true that he who produces 2 lbs. of honey where only one was produced before, benefits mankind.

Let us strive to attain a high standard in this pursuit, by storing our minds with that knowledge which will enable us to surmount all obstacles in our pathway to success.
P. P. Collier.

Bee-Keeping as a Pursuit.

READ BEFORE THE MO. B. K. ASSOCIATION.

"Bee-keeping as a pursuit, or life work," and "Who shall keep bees?" are themes which I have chosen to present for your consideration. The sacred Scriptures and ancient history give us but a faint idea of the mode of bee-keeping in ancient times. We have books on bee-keeping, by Hunter, Huber, and others, that refer us back two and three hundred years; but it was not until 1852, when the movable-frame hive was invented by Langstroth, that bee-keeping began to assume a position among the vocations of man. After the invention of the movable-frame hive, which enables the votary to study the interior workings of the hive and learn the nature and instinct of the noble little workers. bee-keeping was reduced to a science, and now occupies a permanent position in the world. Men of talent and wealth are prosecuting it with more or less success, according to the ability and adaptation of the person to the pursuit and the intelligent labor bestowed upon the apiary.

But few men are adapted to the business. To be successful those who engage in any kind of business must have natural adaptation to and love for it, they must prepare themselves by study and application to prosecute it. In several States we have Professors of apiculture, in the State Universities, and young men are studying it as a science; thus laying the foundation for a life work. It takes a life-time to learn all that may be learned pertaining to bee-keeping. There are mysteries yet unsolved which by arduous labor may be brought to light. The movable frame, the honey extractor, and the introduction of the Italian bee, have all been brought to light in the last few years, and no one can tell what inventions and discoveries may be made in the future!

We are but the pioneers in scientific bee-culture, and it remains for succeeding generations to develop and perfect it, so as to reap the greatest amount of profit. The study of bee-culture affords us pleasure, but the practice of it, if intelligently directed, affords us both pleasure and profit, and that is the great desideratum in all our labors.

"Will it pay?" is the question. Bee-keeping is as sure to pay as any other pursuit; but like others, it must be persevered in. Man fails in the vocations of life from a want of a natural adaptation and love for that particular pursuit. Many have rushed into bee-culture hoping to realize a fortune in a short time. Such are doomed to disappointment. To succeed in bee-keeping we must be content to go slow at first, build up by degrees, labor and wait, that our efforts may be crowned with success.
N. P. Allen.

For the American Bee Journal.

Is Wax Wholesome?

Some assert that comb honey is not wholesome on account of the wax. I wrote to Dr. Klencke, a celebrated doctor in Germany, to get his opinion on this subject. Dr. Klencke answered: "It is not proved that the eating of wax is injurious. Greater quantities of wax, than comb honey contains, might produce indigestion. Wax is sometimes used as a remedy for diarrhœa or obstinate dysentery. The cerine that wax contains has salutary effects. The myricine, another constituent of wax, is irritating, but not very hurtful, unless eaten in greater quantities than in comb honey."

Let me add, that the danger of wax eating is lessoned by the mannite that honey contains. Mannite facilitates digestion; for manna is a well known purgative.

Mr. P. L. Viallon published in the Journal, Oct. number, a good article on the analysis of honey. The acid from the bees is formic acid. This acid is used as an anti-putrefactive agent, as it draws together the flesh. Formic acid is the cause of itching, to some persons, when they have eaten honey.

The pain of a bee-sting can be relieved by the application of prussic acid; as these substances are similar, it is a true homeopathic cure. *Similia similibus.*

Is the Bluet found in the U. S.?—[No.—Ed.]
R. Mayerhoffer.
Editor of *Der Bienenvater aus Bohmen.*

Annual Meeting.

The seventh annual meeting of the North-Eastern Bee-Keepers' Association will be held at the Temperance Hotel, in the city of Syracuse, N. Y., on the 7th, 8th and 9th of February, 1877. First session at 1 o'clock, P. M. of the 7th.

Interesting papers are expected from eminent apiarians from abroad. Efforts are being made to sustain the popularity and usefulness of the Association.

Several members are expected to read essays or deliver addresses. Come prepared to report accurately, the season's operation. We wish to know the number of stocks kept, spring and fall, condition, kind of hive, amount of honey produced, box and extracted, wax made, remarks on the value of the honey season, etc. The statistical table prepared by this Association is original and will again be arranged.

R. Bacon, Pres. J. H. Nellis, Sec.

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Italian QUEENS for 1877.

We will offer, the present season, our fine line of **Queens** at the following low prices. Every pains being taken to produce a choice queen; the kind sent **you** will be the **same** as raised for **our own use.** Safe arrival guaranteed on **all** Queens.

Unwarranted Queens, each	$ 1.00
" " per doz	11.50
Warranted Queens, each	1.50
" " per ½ doz.	8.00
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Tested Queens, before July 1st	3.50
" " after July 1st.	2.50
" " " " 4 for	9.00
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The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, MARCH, 1877. No. 3.

Editor's Table.

Monroe Co., N. Y., Feb. 10, 1877.—"Do bees get honey from our common red clover? If not, do they hover around clover fields unaware of the fact?" J. V.

[The Italians do get honey from our common red clover. The black bees essay to do so very rarely, if ever.—ED.]

"Which is the best honey-producing plant?" J. G.

[I know of nothing surer or better than melilot clover. It does not bloom the first year, and lasts but one season, but it will re-sow itself; if sowed thickly, it kills other weeds. Ten acres of melilot would give work for one hundred colonies. The crop would be permanent, if sowed two years in succession on the same spot. To get it blooming in September, it should be cut about the last of June or a little before. Then it would start new shoots and be covered with flowers from the last of Aug. till frost.—CH. DADANT.]

Tipton Co., Tenn., Jan. 16, 1877.—"I have 9 colonies of blacks in box-hives. I intend to get Langstroth hives in the spring, and transfer my bees to them. On May 10, I had a fine swarm come out. I hived them, and they worked finely for 4 days, making several pieces of nice comb and filled it with honey. On the 5th day they were again on the wing. I put them into the same hive again, it being a new one, but they came out again. I hived them a third time, but they would not stay, so I concluded to let them go. They settled on a small pear tree in front of the hive. I paid no attention to them, and they then settled on the bottom of the hive, remaining there till night. I then carried them back to the mother hive, and brushed them off. They soon entered it, and have done well ever since. What was the cause of the repeated swarming? When is the best time to transfer, in this county? The moth fly and red ant are very troublesome here. How can I get rid of them? Please answer in the A. B. J." D. E. HAYNIE.

[I have had one case very similar to yours. I could never account for my own, so will not try to in your case. In my case there was brood in all stages, and yet they would leave.

The best time to transfer is in the middle of warm days, during the first gathering of honey in spring. The combs are then light, and if the bees are busy storing, they will not trouble.

To protect against the moth, keep your colonies strong, and never allow surplus combs to hang where moths can get at them.

To destroy ants, mix Paris Green with syrup, and place in the top of hive, where the ants can reach it, but where the bees cannot.—A. J. COOK.]

1. Please give in the JOURNAL your best advice on the introduction of queens, immediately after the old queen is removed.
2. How should weak colonies be united, so they will harmonize?
3. What is the best way to feed light colonies? E. P.

[1. With more than 200 imported queens introduced in our apiary last year, we lost only 5 by introducing. As this percentage is small, we have full confidence in our plan, which is to remove the old queen; to put the queen to be introduced, caged in a sheath of coarse wire-cloth, between two brood combs at one end of the cage, a little above the frames, to give greater facilitiy in removing the cork. Then wait 48 hours before removing the cork. Open the cage quickly, but carefully, not to arouse the anger of the bees, and to avoid robbers entering the hive. To find if the queen is alive, without removing the cage, we remove the stopper and put in its place a stopper made of a small piece of honey comb, adjusted loosely in the cage. Then bring down the cotton quilt, which we use in place of honey-board, and shut up the hive. The cage can be removed the next day. In seven days we see if the queen has been accepted. If there are eggs, the queen is safe, if there are none and there are queen cells, the queen has been killed. All the queens we received last year from April to August, were introduced safely. The 5 killed were received during Aug. and Sept. In the fall months bees are more difficult to handle, especially if honey is scarce.

2. To unite colonies, kill the oldest or poorest queens; cage the queen that you

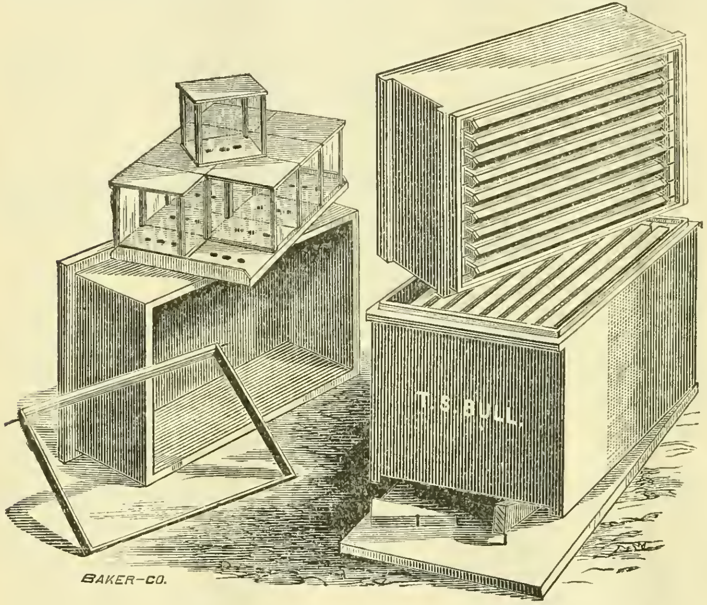
want to preserve and put her between the combs, as when introducing. This is indispensable to prevent her from being killed and also to insure success. When the bees of two colonies are mixed, both queens are attacked by the strange bees, who gather around them in compact balls, in which they can be stung, smothered or maimed; sometimes both queens are killed. Then, after sundown, bring the hive to be united near the hive containing the queen; open the hives and put the frames of the hive to be united beside those of the hive containing the queen. If the frames were loosened beforehand, you can take two or three frames at once, by putting your fingers between them. If the bees to be united are of a different race, it may be advisable to sprinkle some sweetened water in the hive as soon as the uniting is performed. To prevent bees from returning to the old place, put a slanting board in front of the hive, as an obstacle to bees emerging from the entrance. Seeing something strange, they look around the hive and remark that their location is changed.

3. Feed sugar candy. It is better than honey or syrup.—Ch. Dadant.]

Franklin Co., Mass., Feb. 1, 1877.—"Will you please describe, in the A. B. J.. Mr. T. S. Bull's hive, that you say is in your office."
Jas. P. Howard.

[The cut will give a good idea of it. The bottom board is hinged on behind, to facilitate its being cleansed; the two little blocks in front, are to contract the entrance at will; the frames in the brood chamber are 15x10 inches inside; those in the super, 15x 5½; nails are driven into each end of frame (see frame to the left), which fit into notches; the honey-board has three holes corresponding to three in each honey box; pieces being nailed at each end of the honey-board to keep the boxes in place. The honey boxes are 4x6 in., 5 in. high; the tops of the frames in super are ¾ in. square, but turned so as to give one sharp edge up, instead of the flat side, and the other down for the comb to be attached to.

Mr. Bull calls it the "Ne Plus Ultra." It is not patented. Now all our readers can criticise, and form their own opinion of it, and bee-keepers usually differ in opinion as often as anybody.—Ed.]



T. S. BULL'S "NE PLUS ULTRA" BEE HIVE.

Boone Co., N. Y., Jan. 26th, 1877.—"Bees doing well, with the exception of one hive which has dysentery. The bees crawl out in front of the hive and discharge their fœces; they are very uneasy. What is the best to do with them?" J. F. Pelham.

[You can do nothing more than to hope for weather suitable for them to fly out, unless you take them into a warm room, place them in a large box covered with mosquito netting, in which case they will void their foeces and be all right. I have tried this with perfect success. The hive for convenience should be placed in the box before the room is heated. When quiet return them to the stand.—A. J. Cook.]

☞ Moon's *Bee World* has been incorporated with the *Bee-Keepers' Magazine*, of New York, Mr. Moon acting as corresponding editor. The *Magazine* announces that those who have paid for both papers will have their time extended on the *Magazine* to cover the amount due on the *World*. On account of failing health, Mr. Moon offered us the *World* last fall, but we declined—for if the A. B. J. "possessed the whole *World*," it might loose its own self, you know! Here is our ☞ friend King; "Success to you."

More Premiums.—Friend Murphy sends the following: "I offer a No. 1 Extractor (the wood part of black walnut) for the one sending the largest number of subscribers to The American Bee Journal between March 1st and Dec. 31, 1877. The publisher to be the judge."

Friend Hardin Haines offers an Italian queen to the one sending the largest number of subscribers to the A. B. J., between March 1 and August 1, 1877.

These are all in addition to our premiums. It will pay well to spend a few hours canvassing for the A. B. J.

☞Circumstances having transpired that will indefinitely prolong friend Clarke's stay in Canada, we shall not have the pleasure of his company, or be able to carry out our original plans in connection therewith. Such is life!

☞ A friend sends us a clipping from the *St. Nicholas* (now going the rounds of the papers), stating that bees go 40 miles for clover. That story was probably written by "Old Nick," for the next edition of "Extravaganza Americana!"

☞ We are now getting up a beautifully Illustrated Catalogue of everything used in the apiary, with Prices Current, and much other information, which we will send FREE to all who desire them. As we wish to get one into the hands of every bee-keeper in the United States and Canada, we will supply them FREE in any quantity to those who will kindly distribute them.

Dr. J. P. H. Brown offers as a premium to the person sending the greatest number of subscribers to The American Bee Journal, between now and the first of July, a tested queen of imported mother. The queen to be sent upon presentation of certificate from the publisher, certifying to the number of subscribers sent.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to The American Bee Journal with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the Journal. Premium queens will in every case be warranted.

Centennial Award.

The following letter from England will explain itself:

London, England, Feb. 2nd, 1877.—Many were surprised at the small collection of apiarian apparatus at the Centennial. Our display consisted of bar-frame hives of different descriptions, our improved cottage hive with bell glasses, the divisional super, zinc adapters with perforations to admit workers, but small enough to exclude the queen or drones; stereotype plates for making impressed wax sheets, Cheshire's apparatus for making wax guides, the observatory Unicomb hive with Venetian blinds, honey extractor, bee feeders of various kinds, comprising bottle feeder, new, round wood feeder, zinc feeder, etc.; fumigators, honey glasses, bee veils, india-rubber gloves, and all appliances for the apiary. We have just received through the British Commission a certificate of award with reasons for giving same, as follows:

Report of Awards, Philadelphia,
Dec. 12, 1876.

For a large and varied collection of economical hives, so arranged that the honey can be taken without the destruction of the bees. Special attention is directed to the Unicomb hive with Venetian blinds to allow the bees to be exposed to light whilst the sun's rays are excluded. Also for a honey extractor by centrifugal force which removes the honey from the combs without injuring the latter, which can be returned to the hives. John Coleman,
On behalf of the Judges; and approved by "Group of Judges," with five signatures attached.

I shall preserve it as a momento of the great Centennial Exhibition of 1876.

Alfred Neighbour.

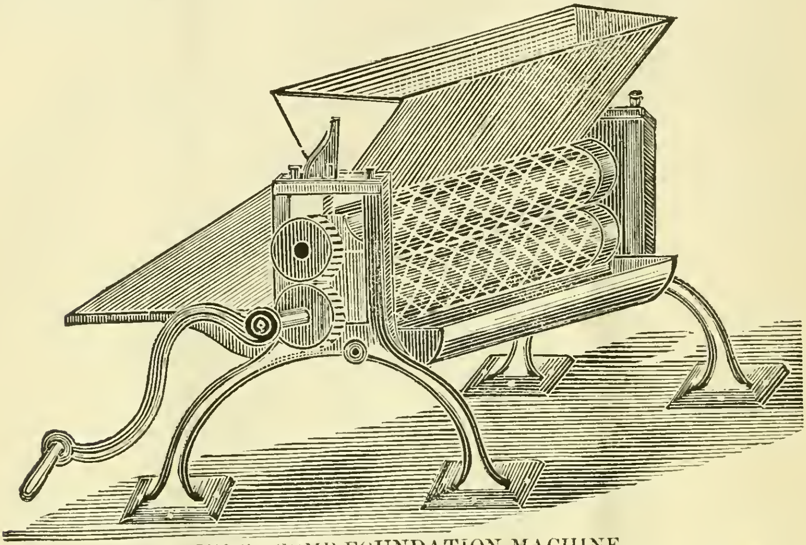
☞Having devised a new and valuable implement in the management of bees, which I will sell as cheaply as it can be afforded, if well made, I ask bee-keepers: If said implement proves a valuable help in their hands and a benefit to the bee-keepers of the world, to give the inventor the *credit* of said invention, and, last but not least, their orders, as a reasonable reward of well doing.

T. F. Bingham.

☞ We can supply Comb Foundation, or machines to make it, early tested Queens or Colonies, all kinds of Smokers, Hives or Extractors, Seeds or anything wanted by bee-keepers at the lowest prices.

☞ The Michigan Bee-Keepers' Association will hold their next meeting in the Supreme Court Room, Lansing, on Wednesday, March 14. An interesting programme has been arranged and there will be an exhibition of honey and implements for the apiary. A cordial invitation is extended, and the hotels have given reduced rates.

☞ Many thanks to those who have kindly volunteered to put up our colored posters in their localities. We have sent a few to those that we felt sure would get them put up, but had not sent for them, and shall send more as circumstances will permit. Friends getting them put up in public places will much oblige the publisher.



KING'S COMB-FOUNDATION MACHINE.

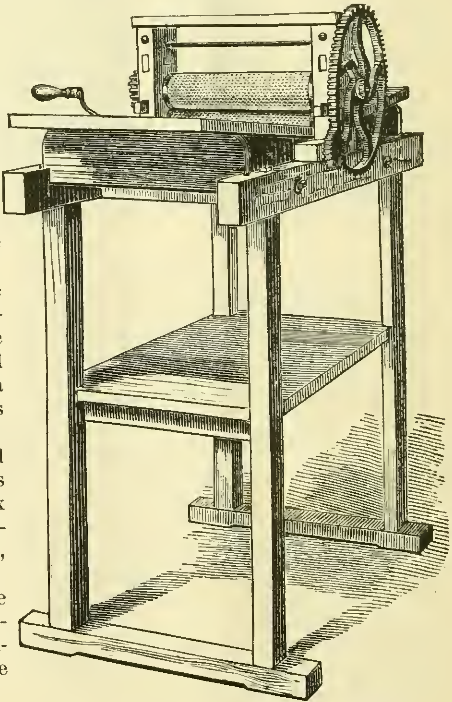
Comb Foundation Machines.

In answer to several inquiries we will here give cuts of the comb foundation machines gotten up by friends Root and King, believing that the reader will obtain from them a much more correct idea, than from reading a description merely. Both machines are creditable to their inventors, as very ingenious contrivances to make the "foundation" of cells for the use of the bees.

The Root machine is similar to the one used by Mr. Perrine, of this city, who purchased it of Mr. Root. The King machine is similar to the Weiss machine, also used by Mr. Perrine. So that these cuts give a tolerably correct idea of *all* the machines now in use.

The rolls are made of type metal and have the shape of the bottoms of the cells cut in each, so that when a sheet of wax passes between them, it receives indentations that form the "foundation" of cells, afterward worked into comb by thebees.

A close study of the cuts will give the reader a tolerably correct idea of the manner of working each machine. Both are advertised for sale in this issue, as well as the artificial comb foundation itself.



ROOT'S COMB-FOUNDATION MACHINE.

Correspondence.

For the American Bee Journal.

Introducing Queens.

Your correspondents (Dadant and Nellis) seem to have some controvesy with regard to the best plan for introducing queens. I consider the plan of one just as good as the other, but in my opinion neither of them are worth knowing, as it takes too much time to introduce a queen in either case. There is no necessity of being over 10 minutes in introducing any queen after the hive has been made queenless, and it should not require over 20 minutes to "unqueen and requeen" any stock of bees. As a general thing, a queen can be "drummed" out in 5 or 10 minutes, but a hive that has an old queen will bother much longer sometimes.

No colony should be allowed to go queenless for even one day, for the sake of introducing another queen, when it can be done in 15 or 20 minutes with perfect safety. I would rather "drum" a queen out of any kind of a hive, if the colony is strong, than to open it and search the combs over. I can usually "drum" one out in half the time that it takes to remove the combs. In a Langstroth hive I remove the honey-board and force the bees up into the cap, and if the weather is warm, I turn them down in front of the hive and let them run in. I will not give my method of introducing here, as I think most of your readers, who have read the JOURNAL the past few years, know how it is done. My plan is successful 99 times out of 100.

While I am criticising to some extent, I would like to say a few words more. Mr. Wm. H. Kirk gives his plan for wintering his bees, and has been successful, and conconsiders "wintering and springing very simple—long-winded orations, to the contrary notwithstanding!" Let those who write essays on wintering take the above hint. By the time one gets through reading one of those long "orations," he does not know where to find himself.

Directions for wintering bees should not occupy over one column in the A. B. J. Mr. K. meant business when he threw out that hint. I will wind off before this gets to be one of those long orations. H. ALLEY.

Wenham, Mass.

For the American Bee Journal.

Ventilation.

In answer to a request, I will tell you what I know about ventilation. I use mostly Langstroth hives, and prefer the double portico; frame 17½ in. long by 9 in. deep. When I hive a swarm I ventilate according to the weather and size of swarm. If the weather is very warm and the swarm large, I may ventilate at both back and front entrances, which are each ⅜x15 in. Sometimes I hive two or more swarms together, and place on the surplus boxes at once, which gives additional ventilation, for the honey-board and boxes are not air tight. When two or more are hived together and you fear them leaving, cover the entrances with wire screens—a frame the size of the portico with wire-cloth tacked on—and immediately place in cellar and darken for 1 or 2 days; don't leave in the hot sun, as I did one, for they will suffocate. For one swarm one entrance may be sufficient. The hive from which the swarm came may need a part of the entrance closed, especially if the weather should turn cool.

For spring and fall I close all back entrances and all of the front except 1 inch. When I place in the cellar for winter, I leave front entrance 1 in. open, and a little ventilation at top of hive for dampness to pass off, by raising honey-board or leaving some of the holes in it open. I have tried all grades of ventilation in cellar for wintering, but with little difference; only leave some open place at top. Where many are stored in a repository, they need some ventilation from without, and this needs to be regulated according to weather. I had a glass hive made 14 in. in diameter and 18 in. high, the top was dome-shaped, there being no open space except whole size of bottom, which I sat on a cheese-cover. I tried to hive 3 different swarms, one of which was quite small, but they would all rush out for air. I put combs in it, but it was of no use.

New Boston, Ill. D. D. PALMER.

For the American Bee Journal.

Thoughts on Insurance and the National Association.

MR. EDITOR:—We are having a cold, dry winter in Southern Kentucky. The morning of Jan. 8th, the mercury stood 28 deg. below zero. I fear we shall have great loss of bees, as but few are protected; they have unhealthy food, for the greater part of the stores were gathered from honey-dew, and not capped over.

By the JOURNAL, I learn that President Andrews recommends bee-keepers to form county associations for the promotion of bee-culture. This is certainly a good idea, and if carried out, would be the means of disseminating a correct knowledge of bee-culture. We have a society here that has done much good; a great many bee owners, who knew nothing of the recent discoveries have become bee-keepers since the knowledge they obtained at the meetings of our society.

The beneficiary society, or mutual life insurance, that Pres. Andrews speaks of, is a move in the right direction, for if you want to make a man useful and successful in any business you must place a reward before him. Many who are engaged in bee-culture would be encouraged to prosecute it with more industry and hope, if they were assured that those depending on them would have a support when they are called from labor to refreshment. Here in Kentucky we have the Masonic Life Insurance Co., organized in 1868, with a president (who is also treasurer) with a salary of $1,000 per annum; a secretary with a salary of $1,500; a state agent, who gets 25 per cent on amount of policies taken; with sub-agents in every Congressional District in the State; and 14 directors who get no salary. The first 3 years the officers got no pay, as the company was not able to pay them, but it has now 3,900 members, and each member pays to the local agent and he to the society $1.10, when notified of the death of a member. The local agent gets the 10 cents, and the dollar goes to the widow or legal heirs of the deceased member. The company now have from $5 to $20 for policy, owing to the age of the applicants. Members are admitted from 21 to 60 years of age. All applicants for membership are examined by a physician; his charges are $2. The Co. now have $20,000 capital out on interest. It takes money to run a rightly-conducted life insurance company that will pay those who become members of it. I would suggest if the company is organized for the benefit of bee-keepers, that the policy fee be not less than $2.00 to start with, and as the company grows in numbers, the fee could be increased. I would also suggest that the officers of the company be in one locality, so that they could hold their meetings and conduct the business of the company with less trouble and expense than if scattered over a large territory. The amount to be paid by each on the death of a member, $1.10.

I hope that these statements may be of some service in furthering the cause of bee-culture, and the organization of a bee-keepers' life insurance association.

N. P. Allen.

Smith's Grove, Ky., Jan. 10, 1877.

For the American Bee Journal.

A Question for our Microscopical Friends.

Did you ever notice the beautiful, little mechanical contrivance in the first joint of the anterior leg of the worker bee? Perhaps also in that of the queen and drone—we have none at this season to examine. If you will place the leg in the microscope and look carefully, you will see on the inner side of the joint a circular opening having a lid or tongue projecting from the upper side, and shaped on the other so as to nicely fit the other side of the opening. For what is it used? Will Messrs. Kellogg, Parker, or some others who have studied the habits of the bee and used the microscope, tell us? It looks like a nice place to hold the ugly worms when the little fellows want to carry them off; let his worship wriggle ever so much, our little Italian would have him fast, and could without trouble deposit him at a safe distance.

Medina, O., Feb. 1, 1877. M.

The Maury County B. K. Society

Held their quarterly meeting on Jan. 6th, 1877. Present:—W. S. Rainey, president; C. C. Vaughan, vice-president; Wm. J. Andrews, secretary and treasurer; E. C. Overton, D. Staples, J. C. McGaw, T. J. Perry, L. A. Boyd, A. Barr, D. J. Estes, J. W. Bates, F. A. Burke, J. A. S. Scribner, and several others.

The minutes of the last meeting were read and approved.

On motion the president was granted until next meeting to prepare his address.

Secretary Andrews made a verbal report of his attendance at the National Bee-Keepers' Society, held at Philadelphia.

The secretary read essays from Chas. H. Muth, Cincinnati, and Prof. Cook, of Lansing, Mich., which were ordered published, and a vote of thanks was tendered to Messrs. Cook and Muth for them.

A running discussion was then entered into on the yield per hive, uniting, and the severity of our winter.

Mr. D. Staples gave a detailed statement of how Mr. J. S. Hill, of Mount Healthy, O., managed his apiary.

On motion, A. Barr, L. A. Boyd and J. R. Lamb were elected honorary members.

Adjourned to the first Saturday in April.

Wm. J. Andrews, *Sec. and Treas.*

Does Bee-Culture Pay?

READ BEFORE THE MISSOURI B. K. ASSOCIATION, JAN. 6, 1877.

This question has been often raised in the bee papers, and answered in the negative with divers additional slurs. Attempting to answer the question, one feels involuntarily prompted to ask another as, viz.:—Does farming pay? or, Does any other business pay?

In every avocation, no matter what, we find but a few who make it pay; a large number make a living at it or a little more, but many find it unprofitable. A reason for this may be a lack of adaptation, or the pressure of circumstances beyond their control.

Stimulated by extraordinary good luck for a year or two, a few sanguine persons have embarked in the "bee business," expecting to make a fortune in a hurry. They were disappointed. To all such I would say: "Sudden jumps in business are dangerous." He does a good business and a healthy one who is of slow but steady growth. It requires a good many years to get things handy in an apiary, not only to acquire a quantity of surplus combs in proper shape, besides a good many little things belonging to an apiary, but also to acquire the knowledge of making the proper use of the stock on hand. We are too apt to over-estimate our ability, in proof of which many invent patent hives, whose experience does not exceed a year or two.

In my estimation it matters but little what shape our hives are, if they are frame hives, and have Langstroth's arrangement, viz: that ¼ in. space all round the frames, and have open, top-bar frames. Another requisite to a well regulated apiary, I consider a location perfectly protected from cold winds. A deviation from this rule is generally the principal cause of our spring dwindling—at least as far as it has come under my observation. My bees have no dysentery since my adoption of the straw mat, and I venture the assertion that this malady, perhaps, would be unknown if all our hives had the proper upward ventilation. Pure air in the hive is just as essential as it is in our habitations. My apiary, located on top of a two-story house, gives me ample opportunity to observe the destruction of my bees by the cold winds of our spring, blown down while attempting to enter their hives on their home stretch. I have had no chance yet to remedy this evil; its time will come, however.

All the requisites for a successful outdoor wintering are:—strong stands with plenty of stores, proper upward ventilation, and in a locality shielded from wind.

All should be prepared to raise both comb and machine honey, as the one is often the means of selling the other. Be particular out of what quality you raise the one or the other. For instance, in this part of the country, where white clover honey gives universal satisfaction for table use, I should nor hesitate to run most of mine into machine-extracted honey. Had I, in addition to the above, a basswood or other light honey crop, I should turn all of it into comb honey. Comb honey is a fancy article only, consequently its appearance is of the same importance as its taste, to insure a ready sale. There are exceptions. I sold, this winter, several large lots of buckwheat honey very readily. They were in neat frames, the honey well capped and of good taste. Unfinished combs should not be sent to a dealer; they should be extracted, and they will be a valuable acquisition for another season. All comb honey should be put up in frames, not only because it finds a better sale, but also because all unfinished combs can be extracted, and nothing be lost.

If the side bars of the honey frames are ¼ in. wider than the top and bottom bars, so that the sides extend ⅛ in. and allow the bees ¼ in. space between the frames, they ship, in sectional boxes, with comparative safety. Care should be taken to provide each frame with a true "starter" to insure straight combs. It is, perhaps, not so universally known that each sectional box should be provided with one full sized comb, serving the bees as a ladder. This is especially necessary if the bees are Italians, and is the means of making them take to the second story readily.

Shipping boxes should not be larger than a soap or candle box, containing 4, 6 or 8 sectional boxes. It should not be heavier than 50 or 60 lbs., and a strip should be nailed on the upper halves of the two sides —no handles extending—so that baggage-smashers can see at once "which side up," and get hold of the strips. This insures the cases being placed on their bottom, instead of having them thrown on edge or a corner. Heavier boxes than these should have handles extending. I am speaking of my own experience; parties in other localities may differ with me.

Extracted honey is a luxury, and a medicine, and is in a fair way of becoming a formidable rival of cane sugar. The introduction of grape sugar or glucose diminished the use of glycerine in a few years. Should not honey—the very best of grape sugar—be apt to make short work with its inferior rival?

Breweries use car loads of grape sugar annually. Once convicted of the superiority of honey, a market for our California brethren may be opened. They will not be long in being convinced, if earnest attempts in the right direction are made. The lower price of glucose, will be the first and greatest objection. But we shall have to meet their views. A demand once established, the price of honey will be regulated like the price of other products—by supply and demand. The difficulty with brewers is that they won't admit of their use of grape sugar. They have to be approached prudently. The American Brewers' *Gazette*, published by John Flintoff, 194 Fulton St., New York, may be a splendid medium.

It is a similar case with wine growers; large quantities of cane and grape sugar are used annually at harvesting time. Not for the adulteration of wine, but, as they say, to make it more palatable. I am convinced of this being a fact; yet, they don't in general, admit of their use of sugar. I speak of personal experience in the latter case, as I am selling several loads of coffee sugar annually to several of my friends, who tell me confidently, what use they make of it. Several, this year, have tried small lots of honey with the best result. Wine grower's journals should be our mediums. An occasional article in such journals would induce experiments and hasten good results. The editors of our bee papers could do, perhaps, a great deal in this matter, and earn the gratitude of our brotherhood, by a little elaboration in the right direction.

The retail trade depends a great deal on locality, but every bee-keeper should stimulate a home trade. Large cities are the centres for all produce, including honey, but the success of the business depends on the man—his prudent management and fair dealing. Purchasers should, by all means, be convinced that the honey is pure. Remember with what suspicious eyes extracted honey was looked down upon a few years ago; it is astonishing that the trade in it could take such dimensions in so short a time.

Comb honey sells better than it did, because it is put up in a more attractive style; I suppose I could not have found a better medium to introduce machine-extracted honey in this locality than 1 and 2 ℔ square honey jars. They look neat and sell readily, where honey retails at all. Round jars can be furnished at about $1 less per gross than square jars; but square jars pack better. A spurious article has been offered for years in our market, in round bottles, and marked, "White clover honey," so that a friend here and myself thought it very desirable to have a different appearance for our "Pure machine-extracted honey."

I send you a case of 1 ℔ jars of our honey for a test of its merits, as to merchantable shape. This package will also convince you that the tendency of honey to granulate is immaterial to me. My customers are posted and buy pure honey either way.

I wish to speak of the bad habit of sticking a piece of comb into a jar of extracted honey. It looks pleasing only to the eye of the ignorant. Bee-keepers know that extracted honey is the only pure honey, and it should require no piece of comb to convince our friends. I find quite a lot of tumblers and jars in our wholesale houses ill-shaped and unsalable, because honey and comb are a granulated mass.

Now let me give you a little example:—Suppose friend A. has a farm, no matter if large or small, and keeps, say, 50 stands of bees; he raises, perhaps, 5,000 lbs. of honey; he may not do that the first year, and such is not necessary. It is, perhaps, better for him if he raises less. Our friend must learn as we have done. His 5,000 lbs. of honey are apt to realize him $500; if it does not, he did not get his honey in proper shape. Our friend must learn to comply with the demand of the market. If they realize him only $400, it is a better business than anything he has on his farm, in proportion to labor and investment. It is true, we have had bad years, but with what crop may we not be disappointed by a poor season?

My own bees, last season, gave 181 lbs. of machine-extracted honey per hive; a sample of which I send you in the above mentioned case. For every one of my stands I have an extra set of combs—every one a worker comb. It requires years to get them in that shape, but now I don't expect my bees to build combs, except when I think it necessary. I have had no natural swarms for the last 9 years, and made only 4 artificial swarms during last season. Hence I expect to commence next season with 26 stands. Should a queen have given out during the winter, I would unite that swarm with its next neighbor; but I don't apprehend losing a swarm on my roof. CHAS. F. MUTH.

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For the American Bee Journal.

Black or Native Bees---Italians.

Much has been said and written, for and against, Italian bees. It is claimed by apiarists generally, that Italians are more valuable than native bees, because they produce more honey, are hardier, more prolific, etc. I am somewhat slow to believe such assertions without reliable evidence.

I have observed that several apiarists have Italianized their whole apiaries, sold queens and stocks at advanced rates, because, as represented, they were so much more profitable than the common bee.

About ten years ago, having honey of my own to sell, I used to buy of others, to add to the trade, among whom was a friend living a few miles distant, who kept about 100 colonies; while I kept about 50—with an average yield of 40 lbs. of surplus box-honey—his averaging only about 25 lbs. per colony. I bought his honey several years, with about the same annual average. During this time our bees (his and mine) were all native or common bees. He finally concluded to try the "better kind," and got some Italians. He Italianized nearly his whole apiary, and claimed that the Italians produced about twice as much honey as the others. But I failed to see it. I continued to buy his honey as before, and the average yield per colony was not one pound more than when his bees were all natives. This, to my mind, is pretty good evidence against the idea that Italians are more productive than natives.

The next claim is, that Italians are hardier, will work in cooler weather, while the natives remain idle, etc. But as several writers for the JOURNAL have taken the negative of this question, I will add another testimony against this claim.

In the fall of 1874, another friend of mine having 124 colonies of Italians, put them in his cellar, in good condition. I had 27 stocks of natives in the cellar. We both took our bees out about the 1st of April, 1875, all in good condition, except that I had 4 or 5 swarms rather light and weak in numbers.

About the middle of April we had a week of winter weather, which tested the hardiness of our bees, and the result was that he lost one-half of his bees, and the other half were so reduced, that from 62 stocks he got only 800 lbs. of box-honey in the summer of 1875. While from my natives I lost the 5 weaker ones, leaving me 22 stocks in good condition, which gave me 1,100 lbs. of box-honey.

Are not these facts strongly in favor of the natives, and against the Italians, as having the superiority over them in production and hardiness? So it seems to me.

Fredonia, N. Y. P. MILLER.

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For the American Bee Journal.

Notes from Tennessee.

DEAR BEE JOURNAL:—The last season was the poorest for honey I ever knew.

I commenced in the spring with about 50 colonies, mostly in good condition; but the cold weather (March 20 to 23) set them back considerably, by chilling the brood on the outside combs. This frost killed a great many of the poplar blooms in the bud; though enough were left from which to get considerable honey, if the season had been favorable. It rained every day during the first week of the bloom, and afterwards it yielded but little honey. From this bloom I took about 1,000 lbs. of extracted honey. About June 1st, I moved all my bees a distance of 9 miles, to where there is an abundance of linn; but rains set in about the time the trees commenced to bloom, and I only got a little more than 1,000 lbs. from that source.

I had to feed considerably in the fall to keep my bees from starving, and would have brought them through the winter all right, but for the extreme cold weather the commencement of the year. The mercury sank to 20 deg. below zero on the morning of Jan. 3rd, which was 18 deg. colder than I ever knew it before. Several of my colonies froze out entirely, and since the weather has warmed I overhauled the rest and found a great many dead. I am afraid some disease is among them. In some of my strongest colonies I find at least three-fourths of the bees dead, which cannot be altogether from the cold, for in weaker ones I find no dead bees at all; and it is reasonable that a strong colony would stand the cold better than a weaker one. To figure it out the best I can, I will not have more than 25 good colonies to commence the season with.

I heartily agree with you in your remarks on Barnes' foot-power saw. I used one last season for making hives, and would not be without it for double its cost. For sawing timber for frames, and cutting rabbits for the frames to hang on, it can't be beat. Every person who has a quantity of hives to make should have one.

After a while I will give you a history of my two-story bee hive law suits.

J. K. McAllister & Co. did swindle me out of that barrel of honey.

J. F. MONTGOMERY.

Lincoln, Tenn., Feb. 3, 1877.

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For the American Bee Journal.

The National B. K. Association—Its Future.

Previous to the assembling of this Association at the Centennial, at Philadelphia, in Oct. last, it was a disputed question as to whether the organization should not be abandoned. In support of such a proposition, it was argued that the expense of attendance incurred by those at a distance from the point of meeting, would more than over-balance any advantage that could be obtained. And was this sufficient apology for the abandonment of the Association? Had it been, through its representatives, in any sense, neglectful of the purposes of its institution? Are there any influences controlling those who take part in its deliberations, which will prove derogatory to the interests of the bee-keepers of our country? If not, why then should a question arise as to the benefit of the Association? Had we not better pause in our reflections, and in the end heed the admonition of Mr. Clarke, (A. B. J., Vol. 12, page 82) where he says:—"Destroy it not, for a blessing is in it?"

While in attendance at the Centennial, Mr. J. S. Coe and myself had frequent conversations on this subject, which finally led to the potent remarks made by him in the convention of Oct. 25th, and which were published in the A. B. J. And now, to enlarge upon the proposition of Mr. C., permit me here to express the hope that the Association may be strengthened and maintained, as the head of our several State organizations; that these State organizations be sustained by County Societies, and that these again, in turn (where the nature of the case will permit) be assisted by township meetings; thus then can a direct chain be kept up, and we at a distance (through our representatives) can derive as much benefit as though we had participated in the deliberations of our National Association. Upon such a system of operation, we can see no reason why the Association cannot be made permanent, and at the same time productive of lasting good to our bee-keeping fraternity.

The main question to keep in view is:—"Will it be conducive to the interests of bee-keepers in general to sustain the National Association?" whether upon the plan suggested, or upon any one more practical, which may be advocated. One point asserted by Mr. C. in his remarks, we think, will not be denied. And that is: "That the questions of how to dispose of our honey, belong to such bodies." And is this not of itself, excuse sufficient to insure the perpetuity of a chief or controlling organization? We must admit that after all we came down to the matter of dollars and cents. Of what use is our tons and gallons of honey, provided we can find no market for it? There may be a few who follow apiarian pursuits for the pleasure connected therewith, but the great majority of bee-keepers have adopted the profession as a source of pecuniary gain. We could give many illustrations of this fact, but it is already well known to every careful reader of the AMERICAN BEE JOURNAL.

And then again, of how much advantage is it to us to have the remarks and essays of our leading and practical men, upon the different points at issue between us; and we here assert that from no other source can we obtain such information so well as from a gathering of prominent apiarists. How then can we secure such results better than by sustaining the National Association?

There are scarcely any among us, I trust, who assembled at our last Convention, who will be willing to say: "I did not learn anything to my advantage." I dare say that there were none who did not leave wiser than when they came. And is it not a gratification to meet prominent apiarists and our bee-keeping friends generally? It is very much like the "harvest home" of our farmers, or more like to the annual gathering at our county fairs, to which we all look forward with so much pleasure, and I hope, with profit as well.

Let us then increase our endeavors to place the National Association upon a permanent and lasting basis. If not upon the plan already suggested, why then let others (more competent than we are) set forth such propositions as will ensure success.

Beaver, Pa., Jan. 9, 1877. B.

For the American Bee Journal.

The Constitution of the National.

FRIEND NEWMAN:—Having received several letters asking for copies of the Constitution and By-Laws of the National Bee-Keepers' Society, and also knowing that there was none at the last meeting at Philadelphia, and having but one copy on hand, I copy that and forward to you with the request that you publish it. I have also gone through all the subsequent meetings and gleaned such resolutions as might possibly be wished to refer to in future.

Yours truly, WM. J. ANDREWS,
Pres. N. B. K. Society.

CONSTITUTION.

ARTICLE 1—NAME.

This organization shall be known as the North American Bee-Keepers' Society, and shall meet annually.

ARTICLE 2—OBJECT.

Its objects shall be to promote the interests of bee-culture.

ARTICLE 3—OFFICERS.

The officers of this Society shall be a President, one Vice-President from each State, District, Territory or Province represented; Secretary, Recording Secretary, Corresponding Secretary, and Treasurer, whose duties shall be those usually performed by such officers. They shall be elected by ballot, and hold their offices for one year or until their successors shall be elected.

ARTICLE 4—EXECUTIVE COMMITTEE.

The President. Secretaries and Treasurer shall constitute an Executive Committee.

ARTICLE 5—MEMBERSHIP.

Any person may become a member by giving his or her name to the Secretary and paying one dollar, excepting ladies, who shall be admited free of charge.

ARTICLE 6—HONORARY MEMBERS.

This Society may from time to time elect suitable persons as honorary members.

ARTICLE 7—SPEAKING.

No member shall be entitled to the floor more than five minutes in the discussion of any motion, resolution or petition, without consent of the Society.

ARTICLE 8—COMMITTEES.

All committees shall be elected by ballot, by a plurality vote, except by special resolution.

ARTICLE 9—MEETINGS.

Each annual meeting of this Society shall be held at such time and place as shall be designated by a majority vote at the preceeding regular annual meeting.

ARTICLE 10—SPECIAL MEETINGS.

A special meeting may be called by the Executive Committee at any time on requisition of five of the Vice-Presidents.

ARTICLE 11—AMENDMENTS.

This constitution may be amended at any annual meeting, by a two-thirds vote of all the members in attendance.

Adopted at meeting at Cleveland, Ohio, Dec., 1871.

CONSTITUTION AMENDED.

Article 5, amended as follows: Any person may become a member by giving his or her name to the Secretary, and paying an annual fee of one dollar, except ladies, who shall be admitted free of charge. Adopted Dec., 1872.

SOCIETIES.

Resolved, That the President of this Society be authorized in its name and behalf, to address a circular to all the bee-keepers of this continent, urging the formation of neighborhood, county, state, territorial and provincial associations, auxiliary to this Society. Adopted Dec., 1872.

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For the American Bee Journal.

An Easy Cure of Foul Brood.

I find in the *Rucher du Sud Ouest*, of Bordeaux, France, an article translated from a German paper—the *Deutscher Bienenfreund*—on this malady; and I reproduce it for the A. B. J., with the hope that it will be found interesting.

CH. DADANT.

"On June 21st, I discovered that a colony received from Baron Rotschultz, of Posendorf, Carniolia, had become foul broody. A few days after its arrival, in spite of feeding, the number of bees did not increase. But as foul brood is unknown here, and as I had never seen this malady, I thought that the small quantity of brood, the lack of industry and desire to build combs were the result of weakness or old age of the queen; and I resolved to replace her, on the first opportunity, by giving the hive a queen cell. I gave the colony some brood from other hives, but the sickness of the colony increased, and I began to smell a peculiar odor, which increased and seemed to come from the fermentation of a liquid substance. Then I resolved to further examine the hive.

"I saw that the bees were mainly on the brood combs that I had given them, and that the brood which came with the bees from Posendorf, was altogether isolated; that the cappings of a dozen cells were deeply pressed down; that all the honey in the uncapped cells (there was no other in the hive) was fermenting, and that the bad smell came from the combs from Posendorf. I cut with a pen-knife some of the cells whose cappings were pressed down, and saw the brown matter they contained. Then I discovered the cause—foul brood.

"I had on hand a little salicylic acid—a substance which is very dear. Then my eyes met a vessel full of soda. Soda stops fermentation more readily than salicylic acid. I resolved to try soda, before getting salicylic acid. I prepared a pail-full of a strong solution of soda and water, warmed by the sun. The first frame was dipped in the solution several times, together with its bees and honey. A few bees swam, the others clung firmly to the comb and were put back with it in the hive. I gathered the swimming bees with a skimmer, and put them in the sun to dry. None of them perished; after a few minutes all returned to the hive. Fermentation and smell disappeared immediately from the immersed combs."

"After this I dipped in the soda, all the combs coming from Posendorf, with their bees and all. The queen had fled to the sound combs that I had given the colony. Mr. L. Krancher, publisher of the *Bienenfreund*, visited my bees and also noticed the foul state of this hive. A few days after I resolved to bathe the queen in the alkaline water, when I noticed her foul smell. For the bath I used 250 grammes (about 9 ounces) of carbonate of sodium, in a pail of water, containing 8 or 10 litres, (quarts) in which I mixed a little salicylic acid.

"The result is complete so far, July 15th. The smell of the hive is normal; the brood is fast spreading; there is now capped honey in the hive; the bees now show some readiness to sting; they had none while they were sick; the pressed cells that I had opened before the bathing, have disappeared to such an extent that it is impossible to detect one, even with the most careful research; and the bees begin to fill their empty frames with comb.

"This remedy seems more advantageous than the solution of salicylic acid, not only on account of its cheapness—10 centimes (2 cents), instead of 3 francs (75 cents)—but also on account of its prompt effect. Instantly—the bees, queen, honey, brood, combs, frames, and everything was purified of the disease.

This remedy was not only administered externally, but as the bees were compelled to suck the lye mixed with the honey, the disease was anihilated in their stomachs. The bathed bees were also purified externally. The drying of the wet bees and of the combs was soon completed by the warm weather. That the bath kills the uncapped brood, is of very little consequence, when compared with the other advantages of this remedy. A. C. KERMANN.

Thurm, Germany.

* * *

Important Mistakes made by Bee-Keepers.

READ BEFORE THE MICH. B. K. ASSOCIATION, DEC. 21, 1876.

The profits of rational bee-keeping are little understood, and if stated, would be still less believed. Since keeping bees—if I except disaster in wintering, which has only occurred twice—I have never failed to secure 200 per cent. net profits, and have often realized over 300 per cent. I fully believe the losses need not be repeated.

But granting that these are occasionally imperative, with the combs and honey still left at my disposal, I could purchase again in the spring, and still secure 100 per cent. on my outlay. This is no guess-work, but a fact built on the secure foundation of past experience, and can only be denied on the ground that there is to be a revolution in the affairs of bee-keeping. The world is coming more and more to disbelieve in revolutions.

But, say you, such results are not common. The apiarists of our country are not the millionaires, nor indeed have their bank-credits been such as to occasion wonder or even remark. But, mind you, I said *rational* bee-keeping. Is it not true that most bee-keepers make this an avocation, a mere supplementary pursuit, which, though they often admit it brings the best returns, still receives only the fag-end of their time, thought and energies? Again, a large per cent. of the bee-keepers let the apiary run itself. They give it no thought, no study, and very little attention. They can not afford to take a bee journal, and as for reading bee books, they have no time and less inclination. What wonder their song is burdened with loss? and what wonder that apiculture, which has to carry such weights, loses prestage among employments? Just as with farming, or any art or profession, where the representatives are ignorant and unthinking, she loses caste. To be sure, we have very many laborers in this field, and I am glad to know that the number is increasing, who, like Adam Grimm, love this vocation, and make it a continual subject of thought and study. I am glad to know that such men are also following in the wake of the one already mentioned towards the haven of competency.

The merchant, even with the closest attention to business, the utmost caution and the best study of the markets, treads an uncertain road; the lawyer and the physician find the walls of competition so high that success seems problematical, even with the severest thought and closest study; while the apiarist, if he will only study to know his course, thinks that he may never miss his bearing—and this very thought and study will yield a double blessing, in that it brings rich entertainment—he will be almost sure to win success, and that too with but little labor.

There are many breakers that stand in the way of the ignorant and unthoughtful apiarist, two of which it is my purpose to present on this occasion. And first I will speak of

QUEENLESS COLONIES.

It is well known that a good queen will lay upwards of 2,000 eggs daily; and as 20,000 to 30,000 bees make a strong colony, it at once appears that the loss of a queen in a full, strong colony for 10 or 15 days is equivalent to the loss of a good stock of bees. That there is this loss in bees is not always true, for with loss of queen the work sometimes ceases in part, and the mortality with the old bees is less; but this lack is of course met by the diminished stores of honey. I have no hesitation in affirming that the loss of a queen in a good colony for 15 days in the gathering season means the loss of a good colony of bees. But is this common—this loss of a queen—with our apiarists? I reply that with most of them it is not only common but universal.

Let us suppose that colonies are allowed to take their natural course in swarming. The bees almost invariably leave the hive before the queen-cells are capped. Suppose in one day these are capped. In seven days the queen comes forth. For five days she remains a virgin, while unfavorable weather or other misfortune may prolong this for two or three days. Two or three more days must elapse before she commences her life's work, and thus we have at least 15 days with our colony destitute of a queen. Hence I affirm that bees are left to take their natural course, in increasing, at a necessary sacrifice of one good stock of bees.

Suppose the apiarist commences the season with 20 colonies, follows natural swarming in its entirety, and values his stocks at $8 each. His total loss will be $160.

The remedy for this is known, of course, to every intelligent, well-informed apiarist. We have only to raise, early in the season, a good supply of extra queens, which will be kept in nuclei, and used as occasion requires. Then, when a colony swarms—which is almost sure to be when gathering is most active, and when loss of a queen will be most felt—a new queen will be given at once to the old colony, and there will be no cessation in its prosperity. Or, still better, new colonies will be formed artificially, and given a queen at once, in which case we can secure against too great depletion of bees, which is quite sure to result, unless much caution is exercised, if natural swarming is permitted.

By thus keeping a good supply of young, fertile, and prolific queens ever in readiness, we may not only prevent expensive delay in time of swarming or of increasing, but may supply the place of any queens which may be lost or killed in handling our bees; or we may supersede any queen which from age or other reason seems to lack in fecundity.

The rule, then, which I would state and enforce, but which is now so generally disregarded, either from ignorance or still more culpable indolence, and which no apiarist can afford to neglect, is: *Never permit a colony to be without a prolific queen.*

The second error to which I would call attention is enforced idleness of the bees, consequent upon ill management on the part of the apiarist. This may characterize either the queen or the workers or both, and may arise from a plurality of causes. First we will consider the

IDLENESS OF THE QUEEN.

The queen may be forced to idleness, either from idleness of the workers, when her instincts impel her to partial or complete indolence, or she may cease from laying simply because there are no empty cells in which she can deposit. During the past three years, and especially during the past season, I have been observing with particular reference to these two points, and can assure all of their truth. In fact, they can be so easily verified by all that I will not wait to detail the proofs.

The remedy for the first cause—idleness of the workers—will appear in the sequel. The remedy for the second—no empty cells in which to deposit—is most easily secured in that invaluable auxiliary of the apiary, —the honey extractor. I have proved this autumn, during the wonderful yields of honey from the golden-rods and other autumn flowers, that the queen may be entirely cheated out of room in which to deposit, even though there be abundance of room in the supers. In such cases, the use of the extractor should *never* be dispensed with, and would be a wise proceeding even though we had to give away our extracted honey.

The second rule which I would urge upon all apiarists is: *Never permit the hive to be without empty cells in the brood combs.*

We next come to consider the idleness of the usually busy workers, the causes which lead to it, and the remedies which may be applied.

The fact that bees are not always busy at their legitimate business is known to all apiarists. Who has not noticed the idle cluster, when bloom is everywhere, and when nectar bathes every floral envelope? Who has not been vexed in his apiary labors, during a dearth of bloom, by swarms of his little workers ever on the alert to add to their stores? And what novice has not been sorely alarmed by the robbing which he has induced, by his ignorance or carelessness at such times? That this idleness is enforced is shown by all literature, and by the many current proverbs which are adorned by reference to our pets of the apiary:

> "How doth the little busy bee
> Improve each shining hour?"

Let us now inquire into the causes which thus compel the active workers to a course which is so contrary to their taste.

CAUSES OF IDLENESS.

1. We notice the most apparent cause—absence of bloom, or the failure of flowers to secrete honey. In all localities there are periods—longer or shorter—when honey bloom is not. In some localities these periods are so frequent or so protracted that successful apiculture is quite impossible. I have found, too, that during wet weather, when rains were of daily or very frequent occurrence, even the best honey plants failed to secrete. Last summer, our white clover season (during the entire month of June) was a complete failure on this very account.

2. If the bees have too little room, or so fill their hives as to perclude further storing, they must of course drink the bitter draught of idleness, whose evil work is shown by their dejected look, as they hang, all forlorn, in front or beneath the hive.

3. It is not infrequent that bees, especially if unshaded during the intense heat of our summers, find their hives a veritable furnace, which, despite all their efforts at ventilation, become uninhabitable. There is a profusion of bloom and the precious nectar fills every corolla tube. The bees long to convey this to their homes, but their hives being a very oven, as it were, they must perforce forego the precious opportunity, when they show their utter dejection by their abject stupor as they cluster outside their hives.

4. Bees that become hopelessly queenless—that is, lose their queen when there are no eggs or brood to enable them to restore the loss—often become totally demoralized. In fact, so great is their discouragement that their very nature and instincts become reversed, and instead of being the "busy bees," they are characterized by indifference and idleness.

5, and last. Our bees may become discouraged and idle, as the result of depletion. They become weak, either from overswarming or other cause; become a prey to robbers, or the bee-moth; and finally, losing all heart, fold their arms (or wings), and in hopeless idleness, await their certain doom.

REMEDIES.

Let us now consider the brighter phase of our subject—the remedies for these evils, which, as I shall show, are in easy reach of the apiarist, and without which he might well feel that the silver lining to the clouds that hung above his business was all too dim to keep hope alive.

Of course, a wise location of the apiary will do much to remedy the first evil. If the region abounds in fruit trees, if white clover is abundant, and even where it is not, if there are yet standing the grand old forests—God's first temples—with their graceful maples, broad-spreading linn, and beautiful tulip trees. If added to this there are, hard by, ample marsh land abounding in solidagos (golden-rods), asters, eupatoriums, (boneset), cereopsis (tick seed), bidens (beggar-ticks). etc., etc.; then the apiarist can hardly escape an annual experience, which shall make him to rejoice in peace and plenty. If the apiarist is not thus fortunate, he may yet hope to do much to insure success. He can hardly escape fruit blossoms and white clover, white alsike clover, rape, black mustard, and mignonnette may be made to take the place of linn, and may all be raised with profit for other purposes, and in lieu of natural fall-bloom, buckwheat and various mints, may be grown; while the Rocky Mountain bee-plant would serve a valuable auxiliary, and may prove profitable to raise on account of its seeds.

The evil of damp, wet weather is one with which it is hard to cope. Yet such seasons are full of hope, as they promise rich future bloom, when the days shall be bright again. It is possible, too, that farther investigation may reveal plants which shall yield richly of honey, and yet be independent of even the most copious rains.

In the spring and during the interims of honey secretion, all through the season, the bees may be kept busy, and the queen thus active, by feeding. This can be done at slight expense, as ½ ℔ per day to a hive is quite sufficient, and I have proved repeatedly that it pays richly for the expense and trouble.

The second evil is so easily remedied that we should hardly suppose it ever need occur; and yet I feel safe in averring that could I accurately state the amount of loss from this cause each year, I should present an array of figures that would startle you. It is not only necessary that the bees have room, but room they will utilize. Boxes, tier upon tier, may be placed above the hive; and yet, if the bees for any cause fail to enter them, they are as effectually balked in their industry, providing there is no other space, as though there were no boxes. This is one of the most common causes of that outside clustering, which is so repellant to the instincts of the bees and so vexatious to the apiarist. The remedy then is to always provide in time of honey secretion abundant room for storing; and if boxes are used, place them very near the brood combs, and if necessary introduce a little comb with uncapped brood in it, so that the bees may enter them. If they will not enter them, some other arrangement must be adopted, such as making use of long hives, or half or full upper stories, in which frames may be placed.

The third evil—too great heat in the hive,—may be easily overcome. We have only to arrange so that our hives may be shaded during the heat of the day. This should never be neglected. I have often set a full cluster of bees vigorously at work, simply by placing a board a foot or more above the hive, thus tempering the intense heat of the interior. Let no apiarist longer persist in the habit of leaving his bees unprotected. Let mercy as well as profit urge him, either by use of friendly tree, evergreen, grapevine, or boards, to see that his hives are shaded from 9 to 4 o'clock, especially as the heated days of May and June send aslant their scorching rays.

The remedy for the fourth trouble—queenless colonies—has already been answered, while speaking of queens.

The last point to be urged is to always keep our colonies gushing full of bees. It is with bees in a colony like children in a home. You can't have too many. Then robbing is unknown, the bee-moth impotent to do harm, while the gathering of stores is so rapid as to make the apiarist rejoice with with exceeding joy. To secure populous colonies, we have only to follow the advice already given, and supplement this course by preventing swarming, or at least cutting short after our second swarms. The greatest argument in favor of artificial colonies (and is a powerful one) is, that we may thus keep all our colonies strong.

Were I asked to give the golden rule for bee-keepers, I would answer, *Keep the colonies strong.* A. J. Cook.

For the American Bee Journal.

Our Interests.

Wm. J. Andrews, president of the National Society, asks: "If there are any opposed to a national organization… ..why?"

I, for one, am so opposed. First, because of the expense of reaching its location. Second, because it is tending to forward the over-production of honey, and working against the interests of the solid back bone of the pursuit, viz., those who produce for their income. Such conventions, no doubt, are beneficial to the supply dealers, and I do not blame that fraternity for trying to blow the breath of life into them. Such a course is your privilege, and perhaps a duty to your family, but my duty is different.

I claim that honey is being greatly over-produced, and that the over-production of any article is not only bad for the producers but for the country also. But for argument sake, I will suppose that such are working for the benefit of their country, and against their own interests. Now I claim that the idea that a child owes its parents an everlasting debt for its existence and care, and that the citizen owes his country that same debt, is utterly false. We have three children who came into our family and our country, without their consent or even being consulted in regard to the matter. Now we owe them as good care, education and general bringing up as we can possibly bestow upon them. Their country owes them a debt she often refuses to pay, viz., an equal chance with their contemporaries, and no more. If my family should come to want, the world is cold, and the poor-master says "for shame; he was a theorist, and never had an eye on the main chance."

The honey producers of this country want a publication devoted exclusively to their interests. They also need economical and select county or sectional meetings, and these, I predict, they are going to have.

I say honey is now over-produced. First, honey will always remain a luxury, at any price which will pay for production. Mark this: A party to whom I sold $12 worth of honey in glass jars, says, "We cannot handle any more honey at any price, our agents find it so plenty everywhere they offer it." The same cause has driven C. O. Perrine out of the honey market, but see how he handles maple and cane sugar syrups. I am inclined to be more charitable than my opponents and give them the credit for honesty; for I verily believe that these speculative, amateur and supply-vending bee-keepers do not see the facts in the case and where bee-keeping is tending.

They are sure to tell us about Adam Grimm. If I could have Adam Grimm's chances I would bet on a competence in 5 years. Adam Grimm lived and labored in the right time. He had "war prices" for his honey. He had lots of bees (as I have now) when these prices began. He had an extractor when bee-keepers had the benefit of it, instead of the consumer. Through good luck, or good management, he wintered his bees when ours died, and sold to us at $12 to $15 per colony. When we must have yellow bees, again he came to the rescue at $5 to $8 each (not $1 each). Adam Grimm was a strict economist; in other words a smart financier, and such men often make five times their pile in the same time at almost all kinds of businesses. Please, trumpeters, let Mr. Grimm rest in peace.

A. I. Root was pleased to help the Saranac man "churn" me, because I plead with bee-keepers not to put poor extracted-before-uncapped honey on the market. Now, see how he rides my horse. He says, "I feel like being rash enough to say I will never extract any more honey until every bit of it has been sealed; and if keeping it in the hive several weeks more will prevent its candying entirely, don't know but we shall do that too."

Why don't his Christian spirit feel like lifting some of the load he has heaped on me by merely saying, "May be Heddon and others are right about ripe honey?" We said long ago that time would verify all the predictions of to-day. When the demand for theoretical hobbies and chicken-fixing supplies is over, A. I. Root will be found, like Gallup, dealing out Watt's pills, or some other middle man-ism! Mark this also!

When you meet a man who loves you at first sight, look out for him. Use your reason. You who really believe bee-keeping is a big thing, remember where the dollar store business landed, and try and keep it big as long as you can. If you have a good locality for forage, or a high-toned home market, write it up just as soon as possible, so cheap-honey fellows can know where to ship. Every business, like Gallup's pills, seeks its level.

Mr. Andrews, like many others, says: "Bee-culture needs such meetings." I don't know what bee-culture does need. I don't know where it lives. Never heard it sigh or laugh! Don't think it needs anything, but bee-culturists need money as much as any class living, and while Bro. A.

spends his symphathies with the pursuit, I will try and look somewhat to the interests of the pursuers. The American Bee Journal rides victorously above all others, probably because it is more closely devoted to the best interests of the present honey producers, and don't toggle on any outside issues!

Gentlemen who hold an interest different from mine and producers generally, and who believe differently from us, we accord to you your right to speak your little pieces. When you choose, to defend your special interests, and we feel no ill-will toward you; but you will show your good sense by always keeping your temper, and allowing us the privileges we grant you.

Perhaps enough has already been said upon this subject, to suggest to each bee-keeper the proper course to pursue. "Straws show which way the wind blows." My sympathies must ever be with the producer, though I shall embrace the first chance to sell out at no large sacrifice, and go to fruit raising, as has H. E. Bidwell, of South Haven, one of our finest practical apiculturists and horticulturists. I notice the demand for fruit is so common and persistent, that right here in this fruit country hundreds of 1, 2 and 3 ℔ cans are sold from each grocery each season, and the same shipped in here from thousands of miles away. If honey would sell thus, we might say, "Amen." I may be too much discouraged; but I think not. I have a much better chance to feel the public honey pulse than many others. James Heddon.

Dowagiac, Mich., Jan. 4, 1877.

P. S.—Allow me to thank Mr. J. P. Moore for his able and manly effort (read at our State Convention) to help the honey producers of this country. No doubt but that we all accord with W. F. Clark's views expressed on page 13, 1877, that "We want a bond of sympathy and union, like the engineers," and don't forget that the object of their conventions is to forward the interests of the already existing engineers, a part of which is to not flood the country with engineers, to the harm of those already engineering, and ruin of the new comers.

J. H.

For the American Bee Journal.

Union Apiary.

The harvest is over, the summer ended, and now the question is: "How many of our colonies will be saved after this long winter?" How anxiously, as the buds commence to swell and fruit trees throw out their bloom, will many bee-keepers hold their ear close to the side of the hive, rap and listen in vain for the cheerful hum of the departed? If you have, until now, neglected to give your colonies sufficient protection, and failed to cover the frames with proper absorbents, with sufficient stores in each colony, it is of no use now for me to counsel you, except to say: "Let them alone, and like an old fogy, trust to luck." If warm weather comes, and the bees are flying, you may put some cream candy or even lumps of crushed sugar over the frames, and cover them up with a piece of clean carpet or woolen blanket. I don't like quilts made of cotton batting; they retain the moisture, and I have seen them even wet; in this condition, of course, they are very cold and injurious. Old worn-out felt skirts are just the thing to spread over the frames for wintering.

Now the bees in the Union Apiary are all tucked away in good warm hives (on their summer stands), and we confidently expect to bring every colony through safely, as we have done for three winters.

The prize essays of Prof. Cook and Rev. E. C. Briggs, published in the A. B. J., for Dec., will well repay for a year's subscription. I am glad, Mr. Editor, I was not one of the committee to determine which of the above were entitled to the prize. My private opinion, publicly expressed, is that it is a drawn game.

The hive we are using in the Union Apiary is "Carpenter's porous, double-walled, back-actioned bee hive." (You needn't laugh!) It is really a back-actioned bee hive, a desideratum never before attained in a bee hive. A door lets down behind, making a platform, and a single frame of the entire brood frames can be pulled out on this platform without disturbing the frames or boxes in the upper story, or interfering in the least with the working of the bees in front of the hive. We did intend to patent it, and to send it to the Centennial for exhibition, but could not raise the needful. Sed G. Wick.

For the American Bee Journal.

Bee Lice.

Ch. Dadant:—May I ask you to answer the following questions:

1st. Are you familiar with the European bee louse, *Beaula cæca?*

2d. If so, do you regard it a serious pest?

3d. Have you ever detected it on any of your imported bees, either queens or workers?

4th. If you had introduced a queen, late in the autumn, and after the act, had found lice on the workers that were caged with her, what would be your course with the colony containing the queen?

I desire these answers for the good of the public. A. J. Cook.

I never saw bee lice in my apiary; yet at three different times during ten years of importing business, if I remember right, I have seen a *Braula cæca* on the corslet of imported queens, on their arrival here. Of course I killed them. My children also remember having seen one or two of these parasites crawling in the boxes, in which dead queens had been received from Italy. I do not remember having seen lice on worker bees, either imported or home-bred.

Having had so little experience wlth this parasite, I am not prepared to answer Prof. Cook's other questions; so I will quote some from the European bee papers.

In the Italian bee journal, *L'Apicoltore*, for 1870, page 229, Prof. Cornalia, of Milan, gives a lengthy and elaborate description of this insect, and its natural history. From it I translate the following:

"This insect first described by Linneus, in 1746. Linneus gave it the name of *Acarus Gymnopletorum* (the last word is derived from two Greek words: *gumnas*, gymnastic, and *plethos*, multitude; *acarus*, performing; hence they are said to perform gymnastics in multitude). This name was maintained by several other naturalists till

1818, when Nitzsch changed it to its present name — *Braula cœca*. *Braula*, Greek, means louse, and *cœca*, Latin, means blind. This insect is eyeless."

I will not give here the description in full of the insect, for it would be tedious to those who are not scientific men. I will only say that this louse is of reddish brown, and sometimes pale yellow color. Its body is globular, convex, and thickly covered with hairs; its length is about ½ or ⅝ of a line. This parasite is generally found around the thorax, where the bee cannot reach it. It is admitted that it cannot suck through the scales of bees, and that it inserts its proboscis into the joints of the body.

Prof. Cornalia was not at the time acquainted with the mode of reproduction of the bee louse. To find it, I have in vain perused the European bee papers; but in "Packard's Guide to the Study of Insects," page 419, I find the following: "The larva of the *Braula cœca* is headless, oval, eleven jointed and white in color. On the day it hatches from the egg it sheds its skin and changes to an oval *puparium* of a dark brown color."

From this I infer that the eggs of bee lice are deposited in some corners of the hive, where the larvæ develop themselves by subsisting on waste matter. The larvæ of flies and fleas, who are of the same genus, have similar habits. Therefore, if hives become infected with bee lice, their owner can easily get rid of them by carefully cleansing the bottom-board and corners of the hives, and by washing them with diluted carbolic acid. The lice on the bodies of bees will thus be prevented from reproducing themselves, and the bees will be freed from them by the natural death of all of them.

It is generally admitted in Europe that this pest is prevalent in unclean apiaries, where hives are for years carelessly left to themselves.

Now I will translate an article, on this insect, from *Le Rucher du Sud-Ouest* (French), Sept., 1876, page 199:

"*La Ferme Suisse*, in the Sept. number, publishes an article from M. C. De Ribeancourt, on the influence of drought on the scarcity of brood, and on the prevalence of bee lice on the body of queens.

"The observations of M. De Ribeancourt on lousy queens, are interesting, on account of his having found a way to free the queens of these parasites, by the help of tobacco smoke. One should be thankful if the remedy is effectual; for to this day no sure remedy was known.

"We think that it would be interesting if the observations of M. De Ribeancourt were introduced by a remark that we ourselves have had the opportunity to make.

"On the 6th of this month, in a very populous hive, full with brood and honey, the queen, who is 1 year old and seems active, was covered with lice; some pale yellow, others reddish brown. The latter being numerous. We were unable to count them; about 30. The hive is exposed at the north. It is raised about 2 ft. from the ground, which is dry and sandy. What seemed most remarkable in this observation, which was made in the presence of several persons, is that according to several authors, the yellow louse is rather scarce, and the spreading of the reddish brown one is favored by moisture. Yet God knows that we have had enough drought in Bordeaux this year."

Mr. T. Sourbe, the writer of the foregoing, is the able editor of the *Rucher*. I wish he would try the means that I have indicated. Below is the translation of the article of M. De Ribeancourt.

"A fact which struck us this year while visiting several apiaries, is that in the mountains, on the Aug. 25, we found nearly every hive broodless, no matter what their strength; except those whose queens were raised in July. This fact, the only one of its kind in many years, must be attributed to the lack of honey, in consequence of the drought.

"We have found very few larvæ of the bee moth, while on the other hand we have found several queens covered with lice. We have counted as many as 70, which covered the body of a single queen; yet the hive of this queen seemed to be perfectly prosperous, although it had not a single bee larva.

"When the queen was freed from the parasites, she was observed brushing her head with her anterior legs, and seemed to enjoy a comfort to which she was not accustomed. Two days after she had lice again, but in less numbers, and we noticed that when tobacco smoke reached her, the lice left while she was making her way through the workers.

"We consider the life of this queen in danger, and we doubt very much whether she will live over the winter. We will subsequently continue our observations."

I must add that according to several reports, the health of a queen is not altered by a few lice, though she seems annoyed and excited. But from 30 to 70 on the same queen would endanger her life. Such a number can be checked by a thorough and oft-repeated cleansing of the hive. If I had a lousy colony I would keep it for experiments, and to learn what time it would take to get rid of these parasites.

CH. DADANT.

For the American Bee Journal.

Points for Reporters.

Until we can so solve the problem of wintering as to reduce it to a practical certainty the business of bee-keeping will partake much of the character of a lottery; the most thoughtful calculations, the most rational expectations may, by a few days of unprovided-for severity, be entirely ruined. This problem, like most other practical questions, will not be solved by the cogitations of some theorizer who has no practical acquaintance with bees. It will be solved by the experience of intelligent bee-keepers.

Among bee-keepers there is now a large number of men and women to whom the business is greatly indebted for the results of their experience. They have carefully watched the little workers, attended to all their needs both in summer and winter, and have frankly stated their success or failure, for the help of others. To these careful observers and honest reporters we look now for the solution of the problem of wintering.

The present long and cold winter offers a favorable opportunity for observations under the severest conditions as to low temperature. For more than two months the weather throughout the Northern States has been cold; for a large part of that time it has been very cold. A good many bee-keepers will bring their bees through with slight loss; a good many will probably suffer serious losses. A clear statement of the condition of the hives in the fall, and of the method pursued in wintering, both by the successful and the unsuccessful ones, will be of great value to the bee-keeping industry. The American Bee Journal cannot better serve its readers than by publishing clear and full reports upon this subject from as many quarters as possible.

1. All reporters should state the kind of hive, the size and number of frames, the quantity and age of bees, the amount and quality of stores, the amount of stores consumed, the kind and amount of ventilation in hives, the number and kind of passages through the combs, the time when bees had their last flight in the fall, and the times of the earliest flights afterwards. Then give the success, good or bad.
2. Many bee-keepers have wintered on the summer stands, without any protection. Let such state, in addition to the above, the location of the hives as to exposure to the wind and sun, and the range of the thermometer. State fully the length and severity of the long spells of cold weather, and any great and sudden changes.
3. Some apiarists, last fall, left their bees on the summer stands, giving them protection in some shape. Let each state the kind and amount of the protection. Let us have especially a full record of methods and of success or failure from those who have packed their hives in chaff, chaff-cushions, straw, shavings, or other material. Give in full the expense of such methods.
4. Some have put their bees in rooms, clamps, and various receptacles other than cellars. State the character of receptacle, its dryness, ventilation, temperature, condition of bees when put in and at any other examinations; give expense.
5. Doubtless a large number have their bees in cellars. Many are looking in this direction for a satistactory solution of the problem. State character of cellar, dryness, highest and lowest temperature, average temperature, height of cellar from floor to ceiling, ventilation, height of hives above floor, distance of hives beneath ceiling, difference, if any, in condition of hives near floor and those near ceiling, condition of entrances to hives, condition of bees at different examinations.

Reports from different sections of the country, embracing accurate statements on the points suggested, and on any other points that may occur to practical men, will be of incalculable value to the guild of bee-keepers. O. Clute.

Keokuk, Iowa, Jan. 26, 1877.

The Honey Bee.

The honey bee iz an inflamible bug, sudden in his impresshuns and hasty in hiz conclusions, or end.

His natral disposishun iz a warm cross between red-pepper in the pod and fusil oil, and hiz moral bias iz, "git out ov mi way."

They hav a long boddy, divided in the middle bi a waist spot, but their phisikal importance lays at the terminus of their subburb, in the shape ov a javelin.

This javelin iz alwas loaded, and stands reddy to unload at a minit's warning, and enters az still az thought, spry az litening, and as full oph melankolly az the toothake.

Bees never argy a case; they settle awl ov their differences ov opinyun bi letting their javelin fly, and are az certain tew hit az a mule iz.

This testy kritter lives in congregations numbering about 20,000 souls, but whether they are male and female, or conservative, or matched in bonds of wedlock, or whether they klub together and keep one wife tew save expense, i don't kno nor don't kare. I never examined their habits mutch, i never considered it helthy, for what would it profit a man tew kill 99 bees and hav the 1 hundreth one hit him with hiz javelin?

The drones seem alwas bizzy, but what they are about the lor' only knows. They don't lay up enny honey, they seem tew be bizzy only gist for the sake ov eating all the time, they are alwas in az much ov a hurry az tho they was going for a dockter. I suppose this uneasy world would grind around on its axle-tree onst in 24 hours, even if there want enny dones, but drones must be good for something, but i kant think now what it iz. Thare haint been a bug made in vain, nor one that want a good job; there iz ever lots ov human drones loafing around blacksmith shops, and cider mills, all over the country, that don't seem tew be necessary for enny thing but tew beg plug tobacco and swear, and steal water-melons, but you let the cholera break out once, and then you will see the wisdum ov having jist sich laying around loose, they help kount.

Bees are not long-lived—i kant state jist how long their lives are, but i kno, from instinkt and observashun, that enny kritter, be he bug or be he divil who is mad all the time and stings every good chance he kan git, generally dies early.

The only way tew git the exact fiteing weight ov the bee, is tew touch him, let him hit you with his javelin, and you will be willing tew testify in court that sumboddy run a one-tined pitch-fork inter yer; and az for grit, i will state for the informashun ov those who havn't had a chance tew lay in their vermin wisdum as freely az i hav, that one single bee who feels well will break up a large camp meeting!

What the bees do for amusement iz another question i kant answer, but some ov the best read and heavyest thinkers amung naturalists say that they hav target excurssions and heave their javelins at the mark; but i don't imbibe this assurshun raw, for i never knu enny boddy, so bitter at heart as the bees are, to waste a blow.

There is one thing that a bee does, i will give him credit for on mi books—he alwas attends tew his own bizzness, and wont allow any boddy else tew attend tew it, and what he duz he duz well, you never see him altering enny thing, if they make enny mistakes it iz after dark and it aint seen.

If bees made haff as menny blunders az the men do, even with their javelins, everyboddy would laff at them.

In ending oph this essa, i will cum tew a stop by concluding, that if the bees waz a little more pensive, and not so darned peremtory with their javelins, they might be guilty of less wisdum, but more charity. But you kant alter bug nature without spileing it, enny more than you kan alter an elephant's egg. Josh Billings.

For the American Bee Journal.

Honesty is the Best Policy.

In the Oct. number of *Gleanings*, page 245, Novice says, in speaking about comb foundation, he has paid all claims for damages, and mentions a claim of Mr. Burch for $50. Now I for one protest against such a fraud. What does Mr. Burch claim damages for? Because, as he says, his comb foundations were made a little thicker than he ordered them. Now for the result.

"The queens would not lay in it." Why, of course not, if the queen had plenty of room and too few bees, either to fill up with honey or cover the brood.

"That it is raised into comb much slower than they build natural comb." Certainly, a new swarm might do it, provided it was twice as strong as the one the foundations were in.

"That the honey is not saleable after it is stored." Now, in all my experience with foundations I never had any such trouble, nor any one else that I am acquainted with. It is true with unbleached wax, you will sometimes see a light yellow streak in the centre of a comb, but never enough to damage its sale; at least not half as much as if the boxes had been filled with old dark combs, as I was informed a Michigan bee-keeper did, and sold it in Chicago for first quality comb honey.

Does any one think that Mr. Burch's claim for damages is an honest one? Allow me to give the evidence that convinces me it is not. The Michigan bee-keepers for some time back thought that they were in possession of some new and valuable ideas that would ultimately revolutionise apiculture in America; but some who had been through the mill said, wait and we will see. They had not to wait long. It is quite common to boast of superior knowledge and skill when there is a rich honey harvest, but let a poor season come and it brings them down to the level of common folks.

Now hear the wailing of Mr. Burch, and out of his own mouth will I condemn him by making a few extracts from the *Bee-Keepers' Magazine* for Sept., page 205:—"The season with us has been *a peculiar one* (the italics are mine). Grim winter persisted in lingering so *very late* in the lap of spring that the hosts of 'bee-dom' were few and far between, when the balmy days of *June* had came. Although June opened auspiciously for the apiculturist it will be remembered by that individual as the *deluge* of 1876. *Day after day* did the heavens unfold their liquid treasures, until men began to inquire, 'Will it never cease to rain?' Still it continued to rain. Our rainy season reached its terminus *in the latter part of June.* The poor, drenched earth received 14 *inches of solid water.* Basswood began on July 10th, closed on the 20th; lasting only *one-half as long as usual.* Since July 20th the bees have been *idle*, so that at this date (as no date is given I suppose about the 20th of August) we have *almost no surplus honey at all.* The season is the *poorest on record* with us."

Now after this account of the season, how can he say the foundation was the cause of his failure? He might just as well say his box-stuff was the cause, if that had been a little too thick! Do bees work in boxes when they are "few and far between?" Do bees work in boxes when it rains "day after day" for about a month? Do bees ever work in boxes in the "poorest season on record?"

Now if Mr. Burch does not return the $50 to Novice, I would humbly suggest that he add a new chapter to "Money in the Apiary," headed, "How to make Money without Bees or Honey." Novice asks, what shall I do? For one I would say, pay no more such bills, but lay the case before a few honest and intelligent bee-keepers, and abide their decision. JUSTITIA.

* * *

For the American Bee Journal.

Bees of the Same Swarm Fighting.

In the "Notes and Queries" department for February, R. C. Cameron tells of bees killing each other after a queen had been liberated among them, and that he was sure that no strange bees had entered the hive. And Ch. Dadant says that he never knew bees of the same colony to fight each other.

I am satisfied that bees sometimes will fight among themselves, when a strange queen is among them. One year ago last summer, when honey was plenty, and bees were not robbing, I was destroying a lot of hatching queen cells in one of my hives. I opened one having in it a mature queen. This queen, just out of the cell, I put down at the entrance of a neighboring hive, and she went in. In a few minutes bees began to come out, that had evidently been stung. This continued until several hundred had been killed, when the young queen which had been the cause, as I then believed and do still, of the trouble, was draged out dead. There were no robbers about the entrance of the hive. As soon as the young queen was disposed of, peace ensued.

I have been in the habit of keeping queens for a few days, by putting them, caged, into hives having laying queens, and generally no trouble has resulted. Sometimes I lay the cage over a hole in the honey-board, and the bees will feed the imprisoned queen for weeks, if forage is tolerably plenty. Last summer I laid a caged queen over a hole in the honey-board of one of my hives, and in a short time the ground in front of the hive was covered with dead and dying bees. I had not opened the hive, and there were no robbers at the entrance. I then opened the hive and found the bottom board covered with bees clinched in deadly combat. I removed the strange queen, and in a short time all became quiet again. I am very sure that the bees engaged in this combat all belonged to the same colony, and the more so because honey was so plenty that bees did not care to rob.

Late in the summer, I opened a nucleus hive and found a knot of bees on the bottom, enclosing a dead queen which had entered from another nucleus. This hive contained several hundred dead bees which had evidently been stung; but whether they had been killed by the bees of their own colony or whether they were intruders, I had no means of ascertaining. I know that a young queen will sometimes kill workers, and do it very quickly. I have seen them do it several times.

M. MAHIN.

New Castle, Ind., Feb. 6, 1877.

Our Letter Box.

Dundee, Ill., Feb. 6, 1877.—"Our bees are doing splendidly." J. Oatman & Co.

Dakota Co., Minn., Jan. 29, 1877.—I have 40 swarms in the cellar, doing well. Last season was a poor one, but my black bees stored the most honey in boxes and hives. No pure Italians did as well; though some hybrids did. Italians will keep themselves clear of worms, etc., better than blacks."

L. E. Day.

Saginaw Co., Mich., Feb. 2, 1877.—"Last spring I had but 2 stands of bees left out of 42 in the fall. These I increased to 34, and took 20 on shares; so am now wintering 54. I have Italians and use the Quinby hive; I have a saw mill for making hives."

Dr. C. M. Joslin.

Lancaster Co., Pa., Jan. 27, 1877.—"Bees did but little last season in storing honey. It rained all the time during fruit bloom, and white clover failed. This is a hard winter on bees, and losses will be heavy."

J. F. Hershey.

Waukesha Co., Wis., Jan. 27, 1877.—"My bees in the cellar appear to be doing first-rate; I have 26 colonies in a bee house I had made *a la mode* Coe. They winter well but loose their queens. I like them better outside, in the summer; they are easier to handle, and there is no loss of queens." H. S. Harrison.

Chickasaw Co., Iowa, Feb. 6, 1877.—"My bees are wintering well, so far. I have them on their summer stands, packed in chaff, and so arranged that I can fly them under glass on any sunshiny day, with the thermometer up to or above freezing point. The plan worked well with me, last winter, and seems to be doing so this winter. Please keep us posted through the Journal as to how bees are wintering through the country at country at large."

O. O. Poppleton.

Livingston Co., Mo., Feb. 2, 1877.—"We have had a thaw-out, and are in a delightful warm spell. I have just cleaned out the bees and find them in better condition than usual at this time of the year. They have worked lightly on their stores of sealed honey. I have lost but one colony in 35. I left them on their summer stands. I believe that is the best place to winter them. The requisites are: plenty of honey, strong colonies with a fair quantity of late bees, a hole throughe very comb,and no upward and but very little lower ventilation. I use no quilts or cobs or straw, this time—only a honey board, ⅜ in. thick."

J. W. Greene

Scott Co., Iowa, Feb. 1, 1877.—"The past season was a splendid one, in this section, for bees and honey. I had 30 stands in the spring of 1876, increased to 50 (eight first swarms left for the woods; they would come out and go off without stopping to cluster). I received 2,000 lbs. of honey—600 lbs. of comb and 1,400 lbs. of extracted. From Nov. 15th to Jan. 25th, the bees were confined to their hives on account of a continual frost, but the last four days of Jan. has been warm, and gave the bees a chance to fly. I am wintering on summer stands; all have chaff boxes over the bees; part of my hives are packed with about a foot of straw between them, also between them and the fence, but they contained more frost than those in the open yard. I have used one of Finn's double-walled bee-hives for the past two years, with the best success. To-day it is stronger than any of my other swarms. The past summer I obtained two swarms and 125 lbs. honey—95 lbs. comb and 30 lbs. extracted. I have been slow to adopt this hive as a standard, but after two years of experience, I have come to the conclusion that it is the hive for outdoor wintering; let others think and do as they wish, but I want a hive that gives good returns in summer and always ready for sudden changes of weather and winter."

Geo. L. Gast.

Erie Co., O., Dec. 13, 1876.—"My hives are made as follows: A long box with 20 reversible frames. I can take the frames out, set the hive on end, and put the frames in two sections of ten each, one above the other, making a double decker; or by removing the upper set, boxes or small frames for comb-honey can be put in. The long principle is for breeding in spring, and the reversed form for honey and wintering. An Italian swarm will fill the hive with bees, and then by reversing, they may be crowded into the upper apartment. Please give us your opinion of our arrangement."

Geo. H. Mackey.

[Opinions differ as to the value of your plan of changing. Just now we think those who use extractors favor the two-story arrangement.—Ed.]

Nashville, Tenn., February 5, 1877.—"The Binder you sent me has come to hand, and I like it so well that I send for another, as I wish to preserve my Bee Journals in a convenient form for reference."

Mrs. A. E. O'Neill.

[This is the universal verdict of those who have Binders for their Bee Journals. We now get them up so that they will just hold one volume of the Bee Journal, and as each number can be inserted as soon as it is received, it is thus preserved, and is in the most convenient form for reference at any moment.—Ed.]

De Witt Co., Ill., Feb. 1, 1877.—"In the fall of 1875, I made a box 14 ft. long, 2 ft. high and 20 in. wide. I then made a frame for every hive, 4 in. deep and 14 in. wide, by 20 in. long. In the front end there was a door slide with a screen in it, ¾x5 in.; then a strip 4x14 in. was laid on loosely, to be taken off at will. Then another strip, 4x14 in., nailed down stationary, so as to leave a space 12x14 in.—the size of my hive. On this I placed my hives, leaving a space of 4 inches below the comb for an air chamber, and the screen in the slide pieces as a ventilation for the bees. I then filled the 3 in. space around the hives with sawdust, covering up the top of the hives. They wintered well. Last fall I made the box so that it would take in a double row of hives, on the same plan, and filled in the open space around the hives with thrashed oats, as I had done with the sawdust; only I filled in under the hive, 2 in. deep, with oats to absorb the moisture. The box I put on posts about 3 ft. high, to protect against mice. In this way I can keep out the mice, equalize the temperature, and only let them go out when there is a surety of their returning. Thousands of good hives are lost during winter by letting them go out at will, when they should have been kept in-doors, for safety." J. M. PORTER.

Audrain Co., Mo., Feb. 3, 1877.—"So far most of our bees are standing the extreme cold winter as good as I could expect, though some colonies have lost many bees, and I fear will come out weak in the spring. My 3 old stands, packed in hay, are doing finely, with scarcely a dead bee. I bought 10 hives in Dec.; they are on their summer stands; some of them have lost heavily, but I think I will get them through." P. P. COLLIER.

Waukesha Co., Wis., Feb. 5, 1877.—"I keep about 10 stocks outside, in double hives, made of 1 inch stuff, with 1 inch space filled with sawdust; they do better than those in the house or cellar, besides the advantage of giving them a fly when warm enough. I take off the cap, honey-board and quilt, and let the sun shine on them, which they seem to enjoy. It gives them a good chance to fly and void their excrement. After that they seem quiet, even if it should come off warm. Mine are all doing well." H. S. HARRISON.

Lansing, Mich., Jan. 20, 1877.—"Mr. L. C. Root has sent me one of the improved Quinby smokers. As I stated that this was a patented article in the "Manual of the Apiary," I wish to make the correction. I believe Mr. Quinby generously gave all his inventions to the apiarian public. This smoker I have used for two years. I paid $1.50 for it, and would have been pleased at double the cost. I consider it a very valuable aid in the apiary. After two years, the leather bursted, but this was mended at an expense of 25 cents and one hour's time. Mr. Bingham, of this State, has for sale two forms, essentially the same, though perhaps a little stronger in material and draft, yet costing 50 cents more. I believe Mr. Root has achieved what he aimed at—to make the smoker so cheap and well, as to forestall competition." A. J. COOK.

Los Angeles Co., Cal., Jan. 11, 1877.—"So far, we have had no rain in this section of California. If it does not come soon our honey crop, as well as our purses, will be light. We have had delightful weather all the winter—sunshine all the time. Some of my hives have now 3 frames of capped brood, and larvæ in different stages. I got an imported Italian queen from Mr. Dadant, last fall, and I expect to Italianize my whole apiary, which consists of 100 colonies of blacks. Last spring I had 45 and increased to 100, besides getting 10,000 fbs. of extracted honey. I use the Langstroth hive, lengthened to take 17 frames. They are all painted white, except the fronts which are of different colors. They are in rows 6 feet apart each way." J. E. PLEASANTS.

Marshall Co., Ill., Feb. 9, 1877.—"My bees look well. I have 7 kinds of hives. Finn's porous double-walled bee-hive winters the best on summer stands. I have had 12 of them in use for two winters. On Feb. 1st, I noticed some Italian bees in front of a Finn hive; on the 7th I opened one of them and found brood and plenty of honey. All my bees are in fair condition, but those in the Finn hives are the best. I purchased $7.50 worth of comb foundation from Mr. Perrine; the last lot being too thin, it broke too easily for surplus boxes. I like it well; for heavy swarms I take a strip of comb, 1 inch wide, and fasten to 3 or 4 frames, to secure straight comb building. My yellow bands can keep up with any black bees on their summer stands. The BEE JOURNAL is a welcome visitor." C. M. HALBLEB.

South Pendleton, O., Jan. 7, 1877.—"By the January number of the A. B. J., I learn Mr. W. J. Andrews is the president of the N. B. K. Association, and I judge from his remarks that he intends to try and stir bee-keepers up to the importance of having a National Society that will make itself felt at home and abroad. It is a great pity that at the Centennial a better opportunity was not afforded of letting the world see our success and improvements in apiculture. His suggestion to have some beneficiary idea in connection with the Society, strikes me as something that would hold the Society together, and meets my hearty approval, and I shall use my influence to organize a society here." WM. STUMP.

Montclair, N. J., Jan. 17, 1877.—"I was deeply interested in the address of our worthy president, in the January number of the JOURNAL, regarding our National Society; and trust that every bee-keeper in the land will give good heed to his stirring appeal. A few months ago the early dissolution of the Society seemed imminent; but the increasing interest in the subject leads us to hope that such a calamity will be averted, and that within the present year we shall see it established on a broad and permanent foundation. Very much depends upon the success of the next meeting. If it is composed of a large delegation of earnest, wide-awake bee-keepers from all parts of the country, success will be almost certain. I would suggest that an effort be made to have a large display of apiarian supplies and products. As "Committee of Arrangements," I will see that ample space is provided for the proper display of all articles that may be sent. May we not hope that each State will be represented by a large and well-filled space; and each strive to be the 'Banner State.' It is to be hoped that many suggestions bearing upon the subject will be made through the columns of the JOURNAL." J. S. COE.

Wakefield, Quebec, Dec. 26, 1876.—"King birds are an enemy to bees in some places, but our bee enemies are fish. My bee garden is close to a mill pond; and the first 2 years I kept bees, it was impossible to get them strong enough to swarm during the whole summer. I saw them on the surface of the water and the fish enjoying their feast. Last year I removed them a considerable distance, and they did better, but it is inconvenient to have them so far from my house." JOHN EDMONDS.

Appanoase Co., Iowa, Feb. 9, 1877.—"My bees have been flying now for several days, as the weather is quite warm. They have wintered this far without loss, and are in a very fine condition. I protect my bees, on their summer stands, with straw and chaff, leaving the entrance open, so they can fly when it is warm enough. I think this is a good way to winter bees. I have never yet lost any that were protected in this way. I have a few colonies in a good, dark cellar; they seem to be doing well. I began last spring with 10 colonies, increased to 25, got 600 ℔s. of honey, and raised 80 queens. The season was very good for bees in this section until the 1st of Sept.; after that time very little honey was gathered. I wish the American Bee Journal much success."

M. M. Callen.

Macomb Co., Mich., Jan. 9, 1877.—"I had 21 colonies in the spring. I increased them to 46, mostly by artificial swarming. I put in 8 foreign colonies in the latter part of the season, making 54; from which I have taken 2,000 ℔s. surplus honey, all extracted, and nearly all fall honey. Having only about 375 ℔s. white clover and basswood. The season has not been very good; too much rain and cold, and windy after rain. Basswood blossom was blasted, yielding honey only about 5 days, while last season it produced honey nearly the whole of July. Fall blossoms produced bountifully. Buckwheat is our main dependence for fall production. Fortunately for my bees, our farmers are buckwheat raisers. I winter in the cellar, which is built of brick, with hollow walls and siding outside of brick; a chimney runs down into the cellar, by which I ventilate. Last year I wintered in this cellar without loss, and had very few dead bees in the hives. I could not see that they had consumed any honey. I raised one end of cover of 3 hives, placed ¼ inch block under, giving top ventilation. I think it was a success. They came out strong, and with bright comb; although I had very little mouldy comb, the cellar being very dry. I have so arranged the entire lot this winter. I can easily sell honey; making sales is the least of my anxiety in the business. I have for 9 years been engaged in the mercantile business, selling all kinds of goods, and honey sells as easily as any goods that I ever offered to the public. I believe in encouraging new beginners in the business. I do not think that the product will ever excel the demand, and if I cannot keep pace with others in the business, I am willing to come in behind and do as well as I can, and if it will not pay me I will quit. It pays if attended to, and some years pays largely." W. P. Evritt.

Schoharie Co., N. Y., Jan. 8th, 1877.—"I commenced last spring with 64 stocks, some of them weak; wintered out-of-doors, increased to 84 by artificial swarming, got 3300 ℔s. of box honey in 2-℔ boxes, and 1200 ℔s. of extracted. I built a bee-house last fall, 12x18 ft.; dug in the side hill, planked up next the ground with dirt a foot thick on top, with roof over the dirt. I have now 113 stocks in it, and one out-of-doors. I think it too cross to die. The thermometer inside keeps at about 40 deg. Yesterday I went into it; the bees were quiet, and it was dry inside. A ventilator, 6 in. square, I keep open nearly all the time. I put in 90 stocks on Nov. 29. I bought 24 more and put them in on Dec. 28. There was some frost in the latter, but I think they are all right. A year ago last fall I bought some queens of H. Alley; I lost all but two, one of them I breed from, and if I could not get another like her, I would not take $25 for it. I never saw bees more gentle. I commenced keeping bees nearly 10 years ago, and I have never failed in getting some surplus. Near where I live there are 150 acres of land that was formerly covered with water. Where I used to catch fish I now get the most of my honey from. It produces a species of golden-rod. The honey from it is much better than basswood in flavor and lighter colored than buckwheat. It is a beautiful wine color and very thick, so that I could hardly extract it. It was so dry here, that buckwheat was a failure."

B. Franklin.

Jefferson Co., Ky., Jan. 1, 1877.—"Bees have only done tolerably well this season. Most of my hives were very weak in the spring, and the weather was cold so late that I got only 20 of my best built up tolerably well, 10 remaining weak; making in all 30 hives. I got 150 ℔s. of box honey and 3,500 ℔s. of extracted from 20 colonies. The weaker hives I used for building combs, etc. My honey was excellent and I had no trouble in disposing of it. My father and myself have sold, in our own market, 4,500 ℔s. of honey, averaging 20 cts. per ℔. We marketed it in 30 and 40-℔ cans and 1 and 2-℔ honey jars; selling it to grocerymen, druggists, etc. When we found persons that doubted its purity, we left them what they wanted, without pay, until we came in again, when they invariably paid for it and took more. In this way we built up a good home trade, and could now sell double the amount of honey if we had it. I do not see why others could do the same; build up a home demand and get better prices for their honey. It will pay any one that is making a business of bee-keeping to go to the trouble of building up a home trade. I increased by bees from 30 to 42 colonies. I have doubled my weak hives and fixed them up for winter, on their summer stands. I put four ½-in. sticks across the frames, then a piece of bagging or coffee sack the size of the top of the hive over the sticks, then a box 6 in. deep, the same size, with a good quilt, made of heavy brown cotton and one sheet of wadding, tacked to the bottom of the box. I filled this box with chaff or fine, dry grass, packing it in tight, put it on top of the bagging, pressed it down on the frames; put on the top or upper story; contract the entrance so that two bees may pass, and saw that they had plenty of honey for winter." Wm. Bence.

Polk Co., Iowa. Feb. 10, 1877.—"I put into the cellar 56 colonies the latter part of Nov. I carried them out last week, and let them have a fly, and returned them to the cellar. They were all in good condition. I have no hesitancy in insuring 95 per cent. of any apiary that was well handled last season, if wintered in a good cellar."

H. G. Hendryx.

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☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for The American Bee Journal?

The North-Eastern B. K. Association.

The Seventh Annual Convention of the North-Eastern Bee-Keepers' Association was held at Syracuse, N. Y., on Feb. 7-9, 1877. Mr. R. Bacon, President, in the chair.

Mr. J. H. Nellis, of Canajoharie, Secretary, read the minutes of the proceedings of last year's convention, which were approved.

Among those present were: Messrs. P. H. Ellwood, Starkville; G. M. Doolittle, Borodino; N. N. Betsinger, Marcellus Falls; F. H. Gates, Chittenango; M. B. Warner, Syracuse; J. H. Dudliston, Chittenango; C. D. Jones, Kerkwood; E. D. Clarke, Randallsville; E. F. Wright, Lakeport; J. H. Nellis, Canajoharie, Sec'y, and R. Bacon, Pres.

The committee appointed at Rome last winter to arrange for the representation of apicultural products at the Centennial, reported. Prizes were offered for the best essay, and for best display of honey. The Sec. reported that the Centennial Commission had announced no awards yet, but it is believed that Capt. J. E. Hetherington was entitled to the premium for the best display of honey, and the proper committee had awarded Prof. Cook the premium for the best essay. The report was adopted.

President Bacon then delivered his opening address, in which he dwelt on many important items. [This we will publish in our next issue with other essays.—Ed. A. B. J.]

The constitution was amended so as to make the admission fee 50c instead of $1.

Reception of members followed and 26 names were added to the roll.

The election of officers was then proceeded with, and the result was as follows: president, P. H. Elwood, Starkville; vice-president, G. M. Doolittle, Borodino; secretary, J. H. Nellis, Canajoharie; treasurer, Reubrn Bacon, Verona; honorary vice-presidents, E. D. Clarke, C. D. Jones, Dr. A. H. Marks, and N. N. Betsinger.

A committee of four on order of business was appointed, as follows:—C. D. Jones, N. N. Betsinger, M. B. Warren, G. M. Doolittle.

A motion made by the Sec'y that no member be allowed to speak more than twice, and not longer than 5 minutes at a time; carried.

A proposition to appoint delegates to the convention of the National Association was laid on the table for the time being.

The following questions were submitted:

Will the introduction of a young queen into a stock before they get the swarming fever prevent swarming?

Mr. Betsinger—had tried the experiment, and the bees swarmed.

Mr. Doolittle—This is true of Italian bees, but not generally of black bees.

Mr. Ellwood—The introduction of a young, fertile queen will retard swarming, but will not always prevent it.

Mr. Dooliitle—Everything swarmed with me the past season, in spite of all I could do.

Mr. Nellis—Had little experience, but was of the opinion that the introduction of a young queen would have little effect at prevention.

Mr. Betsinger—Did not think the condition of a queen made any difference as to the result. She may be fertile or a virgin.

With box-honey at 20 cts. per lb., what can extracted be sold at to yield same profit?

Mr. Ellwood—About 15 cts.

M. B. Warner—Was able to get as much for extracted as for box honey, and got twice as much extracted.

Mr. Nellis—Extracted at 10c is as profitable as box at 20c. It is more difficult to market extracted, but at 10c—the price of syrup—it ought to sell readily.

Mr. Doolittle—Due allowance is not made for extra work in extracting honey.

Mr. Nellis—A reduction in price would encourage consumption. Would accept 20c for box and 10c. for extracted, if the latter were taken off his hands without extra trouble.

Mr. Betsinger—Would change my hives and produce only extracted, if sure of 10c. for it.

Mr. Ellwood sold extracted as readily as box.

At what age do bees begin labor in fields?

Mr. Ellwood—It is stated in bee books that they begin at 2 weeks. I think much earlier.

Mr. Betsinger—They begin to labor as young as 6 days, if compelled to.

Mr. Doolittle tried many experiments, but could not, by any natural process, get bees into the field younger than 16 days. They are nurse bees or comb builders up to that time, they can be forced into the field at 6 days, but will return with light burdens.

It was voted to have an informal meeting in the evening, beginning at 7 o'clock, and that the daily sessions begin at 9 a.m.

The evening session consisted of an informal conversation which may be summed thus:

If wintering bees in a house or cellar, do not disturb them during winter. The cold frame has been found unsuccessful; bees are wont to enjoy their freedom. To prevent bees from swarming, make an artificial swarm, and use the extractor. More than one swarm will usually prevent the production of a good crop of honey. By cutting out every cell and putting back the second swarm it generally remains. A safe device to prevent a second swarm is, after 4 or 5 days, to cut out all the queen cells, wait 4 or 5 days more, and again cut out all cells; have extra queens ready, and upon introduction they will be accepted in the original hive. They will rarely swarm when no honey is in the hive. Some have prevented swarming by changing the location of hives just before the climax. A stream of water played upon a swarm will always hold them when in the air. When honey is moderately gathered and weather hot, it is almost impossible to prevent swarming, owing to the vast amount of brood produced. When bees are gathering honey abundantly they are crowded, and there is a tendency to swarm. These principles are true of Italian bees. The disagreement of doctors, was quite marked during the discussion, which ended at 9 o'clock.

SECOND DAY'S PROCEEDINGS.

The treasurer reported a balance in the treasury of $36.71.

Blanks for statistical reports of bee production were distributed. Ex-president Bacon urged attention to this matter.

A communication from L. C. Root stated that illness prevented his attendance. He criticized a communication in The American Bee Journal, from T. F. Bingham, declaring that nothing had been published in the journals that contained any information on bee-culture not found in the books. Mr. Root pronounced this untrue, and his sentiments were endorsed by the convention.

The question of sending delegates to the National Convention to meet in New York next October, was discussed, and it was moved that 6 delegates be sent. The motion was carried. The delegates appointed consisted of Messrs. Nellis, Bacon, Jones, Doolittle, Betsinger and Warner.

Mr. Nellis moved that the committee be empowered to use the influence and funds of this Association for the promotion of the interests of the National, and of this, at the discretion of said committee. Carried.

A communication from James Heddon was read. He said that repositories for bees should have solid walls and be extremely thick. He used a cellar under a building set close to the ground, well ventilated. He is not in favor of a winter flight, believing it hastens destruction. He rather discouraged organization, because bee-keepers are so scattered. California is at present flooding the Chicago and other markets, but prices will in time come down so low as to make it unprofitable for that State to send honey East.

Mr. Bacon—I favor organization, to prevent persons ignorant of the market from ruining it at improper seasons by selling too low.

Mr. Nellis—We must produce honey cheap enough to compete with other sweets, to make it a commodity of general demand and ready sale. Can bee-keepers do this? If so, there is no limit to the business of honey-producing. If not, the business is already overdone.

The best way to introduce queens.

Mr. Nellis—recommended removing the queen and all queen cells at 7 days, dislodging the bees from brood comb, for the latter purpose. He rolls the queen in honey and drops her into the hive. By this method he does not lose more than one queen in 200, and in case of loss, it can be traced to some carelessness. Does not favor caging queens. When it is done, she will be likely to starve, unless she has access to food independent of the bees.

Mr. Doolittle—There is great loss in a hive being 7 days without a laying queen. I make a square wire-cloth cage, open on one side. The open side he ravels out, and after putting in the queen, he presses it into the honey at the side of a comb. With a small knife makes a hole through the comb, which admits only 1 bee at a time. The queen soon acquires the scent of the bees, and generally 3 hours is all the time required to introduce a queen.

Mr. Nellis—Seven days' time secures more empty space for the queen to lay in, and calls out her full capacity. Without this space she is only partially employed. Hence there is not so much loss by this method.

Mr. Betsinger—It is a great loss and brings the brood too late to be of much value to the apiarist. I favor the immediate introduction of the queen by Mr. Doolittle's method.

Mr. Gates—I favor the smearing of the queen with honey from the hive, and her immediate introduction. By the time the bees have cleaned her she has acquired the proper scent and is recognized by the bees.

Others favored this method. Mr. Clarke had had failures by it only in August.

Mr. House—August is a bad season for introducing queens.

How do bees reduce their honey to the nice article after it is capped over?

Mr. Doolittle—All know that honey is usually in this thin condition when first deposited. The bee that brings it in does not deposit it. It is given to the young bees. At night all the bees take this honey into their honey sacks and eject it out, and draw it in through the probocis, until the honey is reduced to the proper consistency. This process causes the well known roaring in the hive, which is heard at night in the honey season.

Mr. Betsinger—The amount of honey gathered in the flush of the season is too great for the bee to dispose of in this way.

Mr. Doolittle—All that is not disposed of daily in this manner is left deposited in cells until time is found for its reduction. After 2 or 3 rainy days the cells are all capped over.

Mr. Nellis—All manipulations and changing from cell to cell is for the purpose of evaporation. The temperature of the hive favors it.

Mr. Betsinger—The young bee's business is to make wax, and this passage of honey back and forth through the proboscis is for this purpose.

Have blacks qualities superior to Italians?

C. D. Jones—I always found Italians the best honey gatherers.

Mr. Warner—I had the same experience.

Mr. Nellis—Black bees work better in buckwheat and build thicker comb. These are the only two points of superiority I observed. I think black bees cap thicker and farther from the honey, thus giving it a white appearance.

Mr. Perry—I know of no point in which the Italian is superior to the black.

Mr. Bacon—My experiedce shows the black bee to be hardier, and to run out the Italians.

Mr. Doolittle—The running out of the Italian is simply because the blacks in the country so much predominate in numbers.

Mr. Jones—I see no superiority in the black, even in getting buckwheat honey.

Mr. Betsinger—The black bee is superior, it does not swarm so much as the Italian.

Mr. House—I like a grade of about ⅞ Italian and ⅛ black.

Does a swarm ever issue without a queen?

Mr. Phillips—Had no experience of this kind.

Mr. House—I never knew a swarm to issue without a queen.

Mr. Betsinger—Had bees swarm without a queen. Tried to prevent swarming by destroying the queens, but they swarmed just the same.

Mr. Bacon—Had similar experience; keeps black bees.

Mr. Nellis—By breeding from stocks least disposed to swarm, the tendency to swarm can be greatly reduced.

Mr. Betsinger—I once thought so, but the last season had dispelled that idea.

Mr. Doolittle—Last season I had no swarming without a queen, unless there was already in the air a swarm having a queen.

Mr. Betsinger—I had a swarm go off without a queen but returned, I think, for that reason.

Adjourned to 1:30 p. m.

A paper by Dr. J. P. H. Brown, of Georgia, on "The Purity of the Italian Bee," read and ordered printed with the minutes.

Is comb foundation advantageous?

Mr. Ellwood—Had not much experience. As far as he had, he failed, but his foundation was not perfect. Think that bees do not make comb of wax but of a material that is changed into wax when they build comb. They can use wax in limited quantity, but not to advantage for the entire building of combs.

Mr. Nellis—I have tried it. Weak stocks do not build on it in time of scarcity. Strong stocks begin to lengthen out the cells. They first thin the bottom of the cells of the foundation. Queens avoid it. Size of the cells may have had something to do with this. It was readily used for storing honey. The cells were a medium between drone and worker cells. The weather was cold when I tried the first experiment. In warm weather I met with the best success.

Mr. Betsinger was unsuccessful with it.

Mr. Bacon called for the reading of a communication from J. P. Moore, which appeared in the AMERICAN BEE JOURNAL. Mr. Moore said that foundation was a failure, and that it would be better, if we had a supply, to melt it up and sell the wax. Artificial foundation is not worth over 10c. per ℔, if natural costs 50c.

Mr. Gates—I cannot get my bees to accept it.

Mr. Bacon—Melted comb is not comb but wax, and more indigestible when melted and manufactured into artificial foundation.

Dr. Marks concurred in this opinion.

Mr. Moore endorsed both. He considered comb more digestible than wax.

Mr. Wright—Bees slight artificial starters while they build on natural. In some cases they tear the artificial down.

The President—The fact that some artifical foundation is composed largely of paraffine might account for its rejection by the bees; they might accept it if made of pure wax.

Mr. Nellis—I would not use it for box-honey. It is good for extracted honey, and is advantageous in discouraging brood rearing. If used for box honey, it must be made of pure wax, equal to natural comb, or it will injure the sale of box honey.

Mr. Doolittle—I have tried to make artificial foundation a success. It sagged badly. Natural comb would be accepted and filled and finished while the artificial remained untouched. This was made of paraffine. I tried wax artificial foundation. The bees accepted it but did not fill out the comb perfectly. A few boxes were filled. It cut badly with a knife, and ate worse. Once in the mouth, the foundation had to be gotten rid of, it could not be swallowed.

Mr. Bundy advocated its use in the brood chamber to avoid drone comb. To get all worker comb built is sometimes difficult.

Mr. Doolittle had some which sagged and leaked in hot weather, to the bees' confusion.

Mr. Ellwood had seen the same thing.

Moved and seconded, that artificial comb foundation is a success. Lost, emphatically.

How many pounds of honey are consumed in producing one pound of comb?

Mr. Doolittle—Up to last year, I concurred with Huber and Quinby, that it takes 20 ℔s. of honey to make 1 ℔ of comb. Tests have been made under unnatural circumstances. My observations lead me to believe that it does not take over 10 ℔s. of honey for 1 ℔ of comb. I believe pollen is sometimes largely used in comb manufacture by the bees.

Mr. Ellwood—Huber's and Quinby's estimates are too high. My opinion is that, in the favorable part of the season, 10 ℔s. of honey is enough to make 1 ℔ of comb. It has been demonstrated that 1 ℔ of comb can be made from 13 ℔s. of honey. It has been asserted that bees will make more comb from sugar syrup than from honey. I think this true.

Mr. Betsinger—20 lbs. of honey to each ℔. of comb is not too high an estimate. My opinion is that it takes an equivalent in work of 30 ℔s. of honey to make 1 ℔ of comb.

Mr. Clarke—I made 50 ℔s. of sugar into syrup, and fed it to 5 stocks of bees. From it I got 20 Langstroth frames of comb, to 5 ℔s. of comb, which would be 1 ℔ of comb to 5 ℔s. of sugar. A quart of water was added to each pound of sugar. Thirty pounds of syrup were deposited in this comb. The work was accomplished in less than 3 weeks. They were not confined and may have gathered some honey.

Mr. Bacon gives late swarms comb, and they put in honey enough to live on through the winter. Without this aid, they are a failure.

Mr. Ellwood—In making estimates, allowance enough is not made for the extra time required to build comb, and hence a larger amount of honey is claimed to be necessary for 1 ℔ of comb.

Mr. Doolittle—Most comb building is done in the night. Others concurred in this.

How much entrance should there be in a 3 lb. honey box?

Mr. Jones—Two 3/8 in. slots, about 4 in. long.

Mr. Doolittle—It should be twice that size.

Mr. Bacon—Many failed by not giving sufficient entrance for the bees.

Mr. Jones—The entrance should not be large enough to entice the queen.

Mr. Betsinger—I open 1/4 in. the entire length.

Mr. Doolittle concurred in this.

Mr. House—The larger the entrance, the better. A bottom perforated with holes, each large enough to admit a bee, was not as well as the same all in one hole.

How large should starters be in boxes?

Several said, "the larger the better."

Mr. Betsinger—I never use a starter more than 2 in. square.

Mr. Bacon—It is difficult to get starters pure enough not to show in contrast to new comb.

Mr. Doolittle—I use a triangular starter, about 1½ in. each side; bees accept it readily.

Why will bees fill more boxes on low hives than on tall ones?

Mr. Ellwood—Because the boxes are nearer the brood, though the honey may not be as good quality.

Mr. Longstreet—I never saw brood near the top of a tall hive.

Will bees winter better in a tall hive?

Mr. Jones—Not in all cases. I get more honey from the low Langstroth hive.

Mr. Nellis—For out-door wintering the tall hive is the best, because the honey is above the bees and kept warm and accessible, but frost effects the honey at the side. In a cellar, where the temperature is uniform, the form of hive has not much to do with wintering.

Mr. Bacon agreed with Mr. Nellis.

Mr. Perry—Tall hives are best, because the live bees can get farther away from the dead.

How to secure all straight worker comb?

Mr. Doolittle—Use a wax guide by means of a straight edge, and hive the bees on frames with such guides.

Mr. House—I space off equally, 1½ in., and use a triangular piece below.

Mr. Betsinger—I favor frequent examination and straigten the comb if it is going wrong.

Mr. Nellis—If started right there is no inclination to vary from a parallel until the combs are two-third built. I incline the hive at an angle of 45°, and turn every other frame round end for end, as soon as the edges of the comb will lap by each other. This makes crooking impossible.

Mr. Bundy—I use comb foundation.

Is the honey extractor a success?

Mr. Nellis—Yes, if extracted honey will bring half the price of box honey, and find quick sale.

Mr. Betsinger—I concur in that.

Mr. Ellwood—I find the extractor a success.

Others favored the use of the extractor in many ways.

Will bees winter as well when run for extracted as when for comb honey?

Mr. Ellwood—They winter better when run for extracted honey.

Mr. Betsinger took the opposite view and contented that a swarm may be too large, and become uneasy because of too much heat at the centre. It was suggested that more ventilation would remedy this difficulty.

What to do with hives that are now half buried in snow?

Mr. Ellwood—Let them alone.

Mr. Nellis—Shovel them out.

Several members related instances of bees 5 or 6 ft. under the snow that wintered well. This suggested—"Finish the burial."

By request, Mr. Bacon presented a detailed description of his bee house.

A ballot for the next place of meeting resulted—Syracuse, 20; Rome, 5; Binghamton, 2; Oneida, 1. Syracuse declared chosen.

N. N. Betsinger and M. B. Warner were appointed a committee to secure a hall.

The convention had the honor of the presence of Miss Lottie A. Wilkins (Nellie Linswik) and two other ladies.

CLOSING SESSION.

The convention was called to order by the President at 9:30 a. m., Friday.

Mr. Doolittle exhibited a 6-lb. box sawed into 3 sections, which can readily be separated, when filled, and sold in separate frames of about 2 lbs. each.

A letter from C. R. Isham, of Peoria, N. Y., was read, suggesting that the attention of the State Agricultural Society be called to the business of bee-keeping, and that it encourage exhibitions of honey at the State fairs.

Rev. E. Van Slyke, of Syracuse, one of the first members of the Association, was introduced, and proceeded to make a few remarks. He is a friend of bee-keeping because it makes man studious and industrious. It compels him to prompt judgment and action. If success is achieved, the bees must be kept and not left to keep themselves. He thinks there is still a chance for the improvement of hives, but all efforts should be made with an eye single to the public welfare, and not in a selfish, money-making spirit.

Mr. Van Slyke had read with interest the theory of Mr. Doolittle, as to the manner of evaporating honey. Does this Convention endorse that theory?

Mr. Ellwood was of the opinion that Mr. Doolittle's explanation of the mode by which bees thicken honey is not substantiated. The theory was originated by Mr. Gallop. The majority believe heat to be the principal agent. Certain entomologists claim that the tongue of the bee is not hollow. If that be true, the peculiar action described by Mr. Doolittle cannot take place

Mr. Nellis—But few members had made sufficient observation to enable them to express a positive opinion.

Which is the best way to winter bees?

Mr. Bacon prefers an out-building above ground, made frost-poof, well ventilated and so arranged that temperature can be controlled. He would not have a floor to a bee-house, as it causes too much jar in walking over it. He would disturb bees as little as possible, and visit them only at night, and then with a bulls-eye lantern. He tests the temperature through an opening from above. Puts a layer of 5 or 6 in. of cut straw above each hive. Is strongly in favor of a winter flight.

Mr. Honse concurred with Mr. Bacon, but prefers a cellar, well ventilated. Did not succeed with straw, possibly because his bee-house is partly under ground.

Mr. Bacon—No board should be placed on the straw, it prevents evaporation.

Mr. House—Bees must be kept dry, and ventilation must be sufficient to secure this, but there must not be too much ; 43 to 45° is sufficient.

The reading of Prof. Cook's prize essay was called for

Mr. Betsinger favors out-door wintering, if hives are covered with snow. Allows bees to fly if the temperature rises to 45°.

MISCELLANEOUS QUESTIONS AND ANSWERS.

"Is anything gained by contracting the distance of frames from centre to centre for spring management?" Mr. Betsinger—There is a slight gain. keeping the heat confined starts breeding more readily in small swarms. In large swarms nothing is gained.

"Suppose the hive is 12x16 in. inside; is it better to have the frames and combs run lengthwise or crosswise?" Mr. Clark—Frames should run lengthwise of the hives, involving less expense and fewer bees to protect the brood.

"How long after the queen leaves her cell does she take her bridal trip?" Mr. Nellis—From 4 to 10 days, varying with the season. If a queen does not lay in 2 weeks after hatching, she should be killed.

"May combs soiled by bees which have had dysentery, be used again?" Messrs. Marsh and Bacon—Combs so soiled are not rendered useless. Bees will renovate them. They may be cleansed with a brush and water. It is well to let them be rained upon.

"Will the drones from a queen that has not mated prove useful for fertility?" Mr. Ellwood—Good authorities say that they are as useful as any.

"What is the best means of keeping the moth out of surplus combs, from March to the middle of June?" Mr. Clarke--Keep them in the cellar, and if infested by moths, fumigate with sulphur.

"Will moths in the larval stage live after being exposed in a zero temperature?" Mr. Nellis—No.

Mr. Elwood did not know at what temperature they were destroyed, but it must be lower than 32°.

Mr. Doolittle narrated an instance where combs had been exposed to 8° below zero. When taken into a warm room larvæ that had been hatched in the fall showed signs of life, and were restored to activity.

"Can bees make anything that looks like a queen from drone eggs?" Messrs. Nellis and Betsinger--No.

The committee in charge of the question box—Messrs. Betsinger, Jones, Warner and Doolittle—reported as follows:

"Is there any such thing as lazy bees?" No.

"Is rye flour better than buckwheat to feed?" No.

"How long from the time the eggs are laid before the bee emergies from the cell in June and July?" 18 to 21 days.

"Does it pay to feed extracted honey for finishing partly filled boxes?" No.

"Do bees make or gather honey?" Gather.

"Best cure for bee-stings?" Unknown.

"Best protection for the hands against stings?" Rubber gloves.

"Best mode of feeding in winter?" Frames of sealed honey.

"How far will bees go to get basswood honey?" 7 miles.

"How many eggs does a queen lay in the course of the season?" 360,000.

"How many of the eggs laid by the queen mature into bees?" As a rule, all; if only one is laid in a cell.

"Where two or more swarms settle together, what is the best way to separate them?" Secure each queen and divide.

"Are bee conventions profitable, so far as dollars and cents are concerned?" Yes.

"Is sugar better to winter bees on than late gathered honey, if the sugar is fed at the same time the honey is gathered?" No.

"Would you advise bee-men to use veils and gloves for protection?" No.

"Does it pay to allow bees to store buckwheat honey in boxes or frames at the present prices, for market?" Yes and No.

"Does it pay to raise dollar queens, when honey is worth 20c per lb.?" Yes, if the entire crop is taken, and not, by one.

"How can the largest amount of surplus honey be secured?" By the best arrangement.

"Does it pay to extract honey that may be replaced with sugar, providing that we find a ready market for our honey at 12½c.?" No.

"When old comb is used, how much can be used to advantage in a new swarm?" For extracted honey, fill the hive; for box-honey, 3 combs.

"Why do Italian swarms leave the parent hive without filling themselves with honey?" From impulse.

"Can a queen sting?" Yes.

"When is the best time to move stocks?" After flying the last time in fall.

"What is the best method of increasing stocks?" Artificial swarming.

"Is spring feeding advised to induce early breeding?" Yes and no.

"Would it not be advisable to cover the top of the frames in spring with quilts or something to retain all heat possible?" Yes.

Mr. Doolittle and others made some remarks concerning the distance bees will fly.

A vote of thanks was passed to the authors of papers read, to the ex-president for his address, to the proprietor of the Temperance Hotel, and to the reporters. The Convention adjourned.

J. H. NELLIS, Sec'y.

[The table accompanying this report will be published in our next issue. It came too late for this.—ED.]

For the American Bee Journal.

Introducing Queens.

I want to add something to my last article on this subject.

Sometimes trifles that are overlooked are of the utmost importance to success, especially in bee-culture.

We have often noticed that, if we use very fine wire-cloth for queen cages, the queens are not fed by the bees, and queen cells are started. The queen is then too much separated from the bees that they cannot see, smell, or caress her; and it is probable that to such a cause Mr. Nellis owes his mishaps in caging queens. Having had several queens killed by using cages made of fine wire, we now invariably use coarse wire-cloth—8 meshes to the inch. With such the queen is among the bees; they can put their proboscis through the meshes to feed her; they know that they have a queen and do not raise queen cells.

CH. DADANT.

☞ We desire to caution our subscribers not to send money by mail; either procure a Money Order, Registered Letter, or Draft.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, APRIL, 1877. NO. 4.

Editor's Table.

Hints to Beginners.

The pleasant weather of February and the cold and blustering spasms of March being now over, we may reasonably expect a pleasant April. But still, its proverbial "showers," which are said to "bring forth May flowers," accompanied with cold and chilling breezes (and in the North even snow) may be looked for. In the Northern latitudes, therefore, do not be in any hurry to set bees on their summer stands. To err on the side of *delaying* to remove them from their winter quarters, will be by far the most pardonable. Keep the temperature of your winter repository as low as 50 deg., if possible; and if you can do so, the latter end of April or first of May will be quite soon enough to remove them.

After their first flight they need no ventilation, and the entrance should be contracted—leaving only about an inch opening. Contract the brood chamber, so that the bees can cover all the frames. If mats are used, let them be put down snugly on the frames, to economise the heat.

If you find a colony without brood, it is probably queenless. Give such a colony a frame of brood from another hive, or unite it with a weak colony that has a good queen.

If you find a weak colony infested with robbers, sprinkle flour on them, and if they belong to a strong colony, exchange places with them. See that every hive has a queen, contract all entrances, and the trouble will usually cease.

Quickly dispatch all moth-worms, if any are found, as it may save a large progeny in the fall.

In the districts where willows, maples, and alders are plenty, bees will gather considerable pollen. As this is so important both for their own sustenance and the nourishment of their brood, if they do not gather it, give them access to flour.

There will now be a constant increase of brood in all healthy colonies, and consequently a daily increasing consumption of honey. Should the supplies be running low, it will be necessary to feed them with honey, sugar, or candy, in order to stimulate them to breeding, as well as to save the existing brood from destruction, for when threatened by famine, bees will often sacrifice their brood. Water is also essential to them; where it is not accessible, it should be furnished to them, as they need it in the preparation of the jelly on which the larvæ feed.

Care should be taken to prevent the bees from building drone comb in the brood chamber. If honey be the object of the bee-keeper, he needs a large army of workers to gather it, instead of a multitude of consumers.

Reports, so far, are that bees generally have wintered well, notwithstanding the unusual severity of the season. Those that were properly cared for will probably come out of winter quarters in good condition; while, as is ever the case, those that had an insufficient supply of honey, or honey of poor quality—uncapped, sour stuff—or those that were too weak in the fall, or queenless, will be the sufferers. If care is taken not to allow spring dwindling, the prospects for a good honey season are very flattering.

☞ Friend Alley, it seems, is on "a dog hunt," and sends us the following for publication:

The country is full of mad dogs. There are probably fifty persons in the State of Mass., who have been bitten by rabid dogs, within one year. No less than seven deaths have occurred in this State since May 9th, 1876. Most of these deaths were caused by the bite of what is known as the white spitz dog. The poison of their teeth seems to be as deadly as that of the rattle-snake. Beware of him. The question is this: Do any of the readers of the JOURNAL know of any cure for hydrophobia? H. ALLEY.

☞ We desire to have a report from as many as possible, for the year ending May 1st. It should be short and concise, giving the number of colonies, how wintered, and their condition at that date. Don't give us any coloring. We only want the bare facts and circumstances, to make a valuable table for future reference.

☞ The Hon. Judge George H. Wright, of Sioux City, Iowa, volunteers the following statement:

> "I have kept bees in various places from Western New York to Western Iowa, for 25 years, and in that time I have taken all the bee papers and read the various authors on the subject of bee-keeping. For clear, concise and practical instruction, valuable alike to the advanced apiarist and the beginner, I cheerfully recommend THE AMERICAN BEE JOURNAL as *par excellent!* And I wish it that success which the energy of the publisher, coupled with the editorial ability it displays, so richly deserves. GEO. H. WRIGHT."

☞ Friend A. H. Hart made us a visit a few days since, and as he had a model of his Badger State Hive with him, he exhibited it in our office. Mr. H., has had nearly a half a century's experience and study of the subject, and is well posted in the art of keeping bees for profit. The hive can be worked in any way desired, from a necleus colony in a hive of 2,000 cubic inches, to 12,000 inches and a mammoth colony. It can be run wholly for box or extracted honey, or for both as required. He adds to the original hive until he has it six times as large as at the first, giving room to prevent swarming and get a strong colony.

The following is his *modus operandi*:

> "Begin in the spring with a swarm in a single standard hive, and stimulate early breeding until more room is needed, then take a right and left side off of two hives, and bring the two together, making 4,000 cubic inches. Hang a division board by the side of the combs, and to add frames or cards, move the division board until the room is filled. Then add another story on the top and arrange for box-honey and the extractor, or for long, low, broad chambers. If for box-honey, place one-half the cards in the center of the lower story, and the other half in the center of the upper story, which will leave a space on each side for a tier of boxes 24 in number; if run exclusively for box-honey, put sixteen more on the top by adding a super; or, to use the extractor in part, operate with the combs in the upper story. The boxes will be close to the cards."

☞ Many seem to think that they can write a letter, put in an envelope, not seal it, and send it for one cent. Of course it is forwarded, but when such come to us, we have to pay *five* cents on it. Nothing written except on a Postal Card, will go for less than *three* cents.

☞ We learn with regret that friend H. A. Burch has lost a workshop, two house apiaries and 163 colonies of bees by fire, besides the appurtenances of the business. He reckons his loss at $3,000, with insurance of $1,500.

BINGHAM'S SMOKER.—Friend Bingham has sent one to this office. It is similar in shape to the Quinby, but of larger tube, and heavier bellows. It burns any hard dry wood, and keeps it ignited. After laying it down five minutes, it has sufficient fire to start again. It is supplied with full instructions for use, and will be kept for sale at this office.

☞ A correspondent asks, "which is right—apiarian or apiarist—when speaking of a keeper of bees?"

We answer, the word *apiarian* is an adjective, and should be used only when relating to bees; thus—apiarian goods, apiarian products, apiarian supplies, etc.

An *apiary* is "a place where bees are kept; a stand or shed for bees;" so says Webster, who also asserts that an *apiarist* is "one who keeps an apiary." There can be no doubt, therefore, about the use of these words—the bee-keeper is an apiarist and not an apiarian!

Friend L. J. Diehl has sent one of his hives to this office, which is described on page 131. Also an improved Quinby smoker, as made by him. It is provided with a double-curved spring and is fastened one on each side of the centre board. The bellows are made firm and durable.

☞ Mrs. Tupper was tried for forgery recently at Davenport, and upon the plea of insanity she was acquitted, and is now in Dakota on a farm. The "insanity dodge" is quite an institution for all kinds of misdemeanors now a days, and gets "many a one" out of trouble.

☞ Ill health has compelled H. N. Tennant to give up his honey-box business for the present. Therefore, let no one send him orders till further notice.

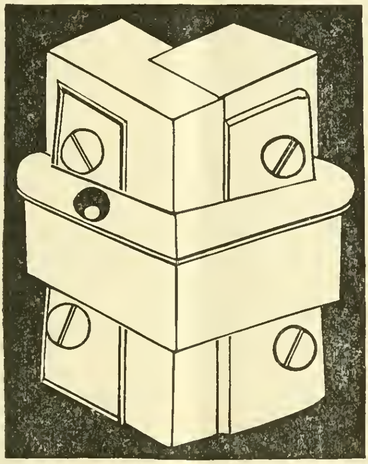
Any one in Canada who has white extracted honey can find a buyer by writing to "W. G. Walton, 70 Vine St., Hamilton."

☞ L. C. Root wants us to ask who invented the round-pointed honey knife. Who will tell us?

☞ The Y. M. C. A. have established a *free* employment bureau at 145 Fifth Ave., Chicago. If any of our readers need farm hands, gardeners, nurserymen, dairymen, or boys, they can communicate with J. M. Hitchcock, the Sup't of the bureau, and obtain them.

Owen Co., Ky., Feb. 7, 1877.—"Dec. and Jan. were cold months with us; but our bees are doing pretty well so far. I commenced 1876 with 8 stocks; increased to 27, and got about 50 lbs. of nice comb honey. I wish some one would give their method of hanging frames, so that they will be true and an even distance apart. I would like to know how to hook frames together, as spoken of by the late Mr. M. Quinby, I believe, so that they will stand when the sides and ends of the hive are removed. Also how the hive is held together without nailing?" G. W. Jenkins.

[If you will study this cut, you will see how Mr. Quinby's clamp is used for hives.



The same only smaller is applied to frames. They are strong, durable and work well. The two wedging pieces against which the sides draws have each two spurs cast on the under side, which drive into the wood before they are fastened, making them very firm. A hive properly put together with these clamps is nearly as strong as when nailed.]

* * *

Dyer Co., Tenn., Feb. 19, 1877.—"Bees did but little here last season. In the spring I had about 40 stands, increased 6, and got only 75 lbs. of comb honey. They are all wintering well; no loss as yet. Do bees always go West when they swarm? If so, why? Nearly all swarms here go west when leaving for the woods. I have two other small apiaries—12 and 18 stands respectively—that did no better than my home apiary. They increased a little but gave no honey." John H. Christie.

[Much that concerns swarming is shrouded in mystery. Bees swarm incessantly, at unseemly times, or refrain from swarming altogether, but who can tell why? They "go West," like some young men should, but their actions, if governed by laws, are unknown to man. If the woods are west of your place, that may explain it in your case. Ed.]

1. Is melilot clover good for hay or pasture?
2. How high does it grow?
3. Will white clover or blue grass run it out?
4. When and how long does it bloom?
5. When is the best time to sow the seed, and must it be sown twice to be permanent and continuous? E. J. Thomas.

Linn Co., Iowa.

1. When melilot is young and tender, stock eat it quite readily, especially sheep. But we do not recommend it for hay or pasture, but simply for honey purposes. It is, however, one of the best of fertilizers.

2. From 3 to 6 feet, with many side branches.

3. Never knew this to be the case.

4. In the latitude of Chicago it begins to bloom and yield honey about the 10th of July and continues thus till heavy frosts occur. Light frosts do not injure it much, if any.

The best time is in the fall, but it can be sowed any month of the year with perfect safety. Sow in the spring with oats, barley, rye, or wheat. By so doing the use of the ground, the first season, is not lost. The plant being a bi-ennial it does not bloom in general till the second year. After it blooms it then dies, root and branch. Whether you sow in the fall or spring, the land should be seeded again the ensuing fall, then you insure a continuous crop.

M. M. B.

* * *

"Is sugar as good as syrup for feeding in the spring?" P. Wilde.

[We prefer to feed thin syrup, for water is also essential for brood rearing.—Ed.]

* * *

Shelly Co., Mo., March 2.

I have a few young swarms in new hives which have become infested with cockroaches. Please tell me, through Journal, how I can get rid of them. Do they eat the honey? or what calls them to the hive? E. C. Phillips.

[Of course they eat the honey. Expel them with your smoker, and kill them. —Ed.]

* * *

Catnip Seed.—We have a nice lot of good clean seed of this honey-producing plant. Bee-keepers should see to it that such and other forage for bees abound in their localities.

* * *

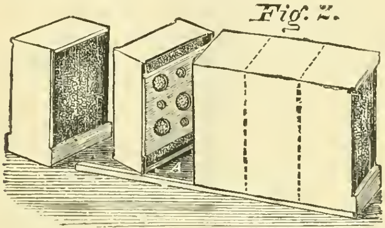
W. G. Walton of Hamilton, offers an Italian queen from an imported mother to the one sending the largest number of subscribers to the A. B. J., before August 15th. Send on your clubs, now, and compete for this extra premium.

Sectional Honey Boxes.

Many inquiries about sectional honey-boxes are now received, and we have requested friends Barker & Dicer to give us a description of theirs and their manner of using them, which is as follows:

The size now described is such as we use on our style of hives, but we make them of any size. The sections are made of two wide and two narrow pieces. The wide pieces are 6 in. long by 2⅝ wide by ¼ thick. They are held together by means of grooves and tenons; one groove in the centre being cut ½ in. deep or ¼ deeper than the rest for the ends of the guide-strips to rest in; they being 6 in. long, ¼ wide, ⅛ thick.

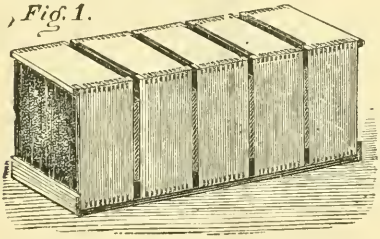
Fig. 2.



When the sections are joined together for a large box, the wide pieces of one section are put next to the narrow pieces of the next section, thus forming an opening, ⅜x 5⅛ in. between each section, on all sides of the box.

The sections are held together by two pieces, 13 in. long by ¼ in. square, nailed lengthwise on the bottom, the other three sides being covered with paper. At each end of the box are two pieces, 5½ in. long by ¼x¼ nailed on the bottom, which forms a chamber between the box and top of the brood frames. Between each section is a division, 4¼x4¼x⅛ in. thick, which is held in place by springing the diagonal corners against the wide sides of each section. We put 5 sections in a box (any number may be used) and 3 boxes to a hive; each box having a light of glass 5½x6 in. in each end. When placed on the hive they rest on the frames and edges; the length of the boxes being across the frames brings the section the same way as the frames.

Fig. 1.



The object in reversing the sections is to form the spaces between them on all sides, so that divisions may be inserted if desired, and the combs be built straight in the sections. We find that the combs will be built straighter in these boxes without the divisions, than in our old style of boxes, which have the sections tight-fitting on the sides. The spaces between the sections prevents them from extending the comb into the adjoining section.

When the boxes are not in use for storing honey they are turned bottom side up on the hive. When used for storing honey, turn over only one box at a time, using 2 or 3 tiers of boxes [if necessary, to give the requisite amount of store room. Forming communication between the upper and lower tier of boxes by removing the paper from over the openings between the sections in the top of boxes. When more than one tier of boxes is used, we use a false rim the same height as the extra tier.

In the construction of boxes we combine both the advantages of a large and small box. They can be readily divided by simply cutting through the paper and the two long strips on the bottom, and when the openings are covered with paper they form a tight box, ready for shipping, without the trouble of handling small sections separately.

Several letters have been received making inquiries about Harden Haines, whose advertisement appeared in the A. B. J. He is a young man of limited experience with bees, but has started out to build up a business in selling imported queens. We have written to several responsible men in the town in which he resides, and their answers have given us the above facts. He has sent us a receipt for a registered letter which he has sent to Italy for bees. His hopes are large and he no doubt draws on his imagination for much of the success which he anticipates. We would not injure a young man endeavoring to start in a legitimate business, but we do think he has been rather premature in advertising before he has safely received even one importation.

☞ We will send a sample of a 2℔ or 4lb, honey box, complete with glass, ready to nail, for 25 cents, each, postpaid.

☞ The bee-keepers of Maquoketa Valley, Iowa, have formed an association; and held their first meeting March 15.

☞ The Abbott Pocket Microscope, advertised on another page, is an instrument of great usefulness for examining flowers, seeds, plants, insects, etc. It is in a convenient form for carrying in the pocket and is thus ready for use on any occasion when wanted. We will send this microscope to any address by mail, post-paid, upon receipt of the manufacturer's price, $1.50.

☞ The Western Illinois Bee-Keepers' Society will meet at Monmouth, Warren Co., Ill., on Tuesday, April 10th. All friends of the bee are cordially invited. Bring anything interesting to bee-keepers with you for exhibition. An effort will be made to get reduced rates at the hotels. A good time may be expected.

WILL. M. KELLOGG.

Our Letter Box.

Oneida, Ill., March 2, 1877.—"My bees are doing tip-top, up to the present time."
Wm. M. Kellogg.

Moultrie Co., Ill., Feb. 20, 1877.—"Bees all right in this section, that were properly cared for. Nearly all others froze, or died with dysentery." A. P. Green.

Keokuk Co., Iowa, Feb. 19, 1877.—"Bees are wintering nicely; had ours out of the cellar a few days ago, let them have two days' fly; they enjoyed it very much and are now very quiet." S. L. Vail.

Allegan, Mich., March 1, 1877.—"Our bees seem to be doing well. They are flying almost daily and working in meal for pollen."
Julius Tomlinson.

Traverse County, Mich, March 6, 1877.—"Please give, in next Journal, Mrs. Adam Grimm's address." S. P. T.

[It is Jefferson, Wis.—Ed.]

Henry Co., O., March 5, 1877.—"I put 11 colonies in the house and set 34 within a foot of the fence, and 6 in. apart. I packed straw between and at the back of the hives. In some I put chaff in the top story, and only lost one, which was queenless. All the rest are in good condition."
Geo. A. Van Horn.

Vernon Co., Mo., Feb. 26, 1877.—"My bees have wintered better than usual; are breeding finely and have been so since January. I wintered on summer stands; have been feeding African spring wheat flour since the warm days commenced; they like it better than any feed I ever found; and, by the way, it is one of the best crops to raise I ever knew. It yields abundantly and makes good food for man or beast."
Geo. H. Mobley.

Sauk Co., Wis., March 7, 1877.—"I took out of my out-door cellar 60 swarms (2 dead) on Washington's birthday. I then went to the woods and found a swarm of bees in a tree. This is pretty good, for 40 miles north of Madison, Wis. W. Porter.

Portage Co., O., March 8, 1877.—"I commenced 4 years ago with one swarm. I now have 20 colonies in good condition. I winter in a dry cellar, with a little lower ventilation. Bees did well here last year. The Journal is always welcome."
F. P. Clark.

Wayne Co., Mich., March 21, 1877.—"Two years ago I began with 3 colonies; last fall I had 12, besides all the honey we could use. Lost 3 swarms in the fall, before preparing for winter. I use the Thomas hive. Is it as good as any, all things considered?"
Wm. Moorhouse.

[Opinions differ as to hives. Any hive that you are accustomed to, and can manipulate, will do. More depends on proper care than any particular style of hive.—Ed.]

Vernon Co., Mo., March 6, 1877.—"I put 35 stands into winter quarters. From 20 colonies last year, I extracted about 1,600 lbs., besides getting 300 to 400 lbs. of box honey." Le Roy Gates.

Abronia, Mich., March 11, 1877.—"I see in the report of the North-Eastern B. K. Association that my article in the A. B. J. was denounced by L. C. Root and others. I have read the report of that honorable body for something 'new and valuable,' but am compelled to conclude that it is another *startling proof* of the statement called untrue, and endorsed by the convention. The convention repeats the substance of my article on comb foundation, published more than a year ago in the A. B. J., and endorses it. Why do they not bring out their 'new and valuable matter,' instead of denouncing what others write?"
T. F. Bingham.

Oneida. Ill., March 7, 1877.—"In reply to M's question, I would say that I have not had my microscope long enough to be able to answer. Perhaps some of the older heads will answer. The month of Feb. was very mild and pleasant, bees could fly a good share of the time, but every day of March, so far, has been cold and disagreeable. On the 4th, the mercury went down to 4 deg. below zero, with nearly a foot of snow on the ground. It is well our bees are packed so snugly. On Feb. 21, I visited the bee cave at the river and found it the best place for wintering bees I ever saw. It is dug out of a sand bank; it is 48 ft. long, 13 ft. wide and 7 or 8 ft. high; plank walls and floor overhead, covered with one foot of sawdust, and the sawdust protected by a roof; double doors in the north end; about 6 ft. space between. It has a sand floor and a ventilating tube in the south end. It contains at present something over 200 stocks, which seem to be in fine condition, though we roused them up some while putting in things from the burning house, which caught fire and burned down while we were there." Will M. Kellogg.

New Orleans, Feb. 13th, 1877.—"Friend Newman: Moon's *World* is *non est.* It seems that the demand for a bee journal in the South is not sufficient to support one, yet there are three in the North, and none in the South. Southern bee-keepers object to the Northern journals, because six months out of the year nearly one-half is taken up with wintering. This is true, and yet with all that is written, many loose heavily. Mr. Benton, in his essay to the B. K. Association of Mich., does not give much credit to bee-culture in the South. He should not call Tenn. the "Sunny South," for there is as much difference between Tenn. and La., as between Tenn. and Mich., and more. The thermometer passed the freezing point here only five times this winter. In Dec., twice, 29 deg.; in Jan., three times, 29, 24, 27 deg.; 27 deg. above zero was the lowest for 40 years until 1877. I can speak of the quality of honey only in La. We have white clover, same in every respect as in the North; swamp flowers yield a heavy honey, of a golden tinge and finely flavored; corn gives much honey and plenty of the very best pollen, color same as swamp, which is much lighter than buckwheat, similar to poplar in Eastern Ohio.

Tallow-tree honey is the only dark honey I have seen here, and my bees did not gather it. It looks like molasses; it is not common here. Alder makes a fine colored honey, and in abundance; Japan plum gave some of the finest honey I ever saw. It blooms in Dec. and Jan. and yields honey and pollen every day while in bloom, unless there is rain or freezing; a light frost does not injure it. The willow gives much honey, has been doing finely for 10 days. The orange comes in during this month, and I will send some to you to taste. To get fine honey one must be in or near the orange section.

"Many have written me about the South. This is my reply: 'If you have a good honey-yielding locality and can winter your bees reasonably well, remain where you are. While bee-keeping itself will pay better, there are other things to consider. Society and politics are none of the best. By coming South in Oct. you may escape malaria for one year. Bring along your locks, for the negroes (though free) still linger around. The summers are long and more exhausting than in the North, but the heat does not rise above 95, and the nights are cool. When La. gets her social and political conditions elevated, and the old slave customs removed, and the U. S. Government build the levees, then the State of Louisiana will be the finest in the Union to reside in. No bee-keeper should move here until he first visits the country; some are delighted and others disappointed, yet very few of the latter. I could not be induced to return North to live, on account of the cold. As I look out of my garden and that of others, and for a moment compare things here and in the North. Bees gathering honey and pollen, young bees airing themselves, yours shut up and freezing; our beans and peas in bloom, grass fresh and green, peach and plum in bloom, etc. I can easily compare it here, same as May 20th in Ohio, and you out on the ice and snow. I saw some snow, but it could not touch this State (too pure)." W. B. Rush.

Grant Co., Wis., March 8, 1877.—"I see by the last issue of the A. B. J. that a writer thinks it is an advantage to have hens around his apiary. A friend of mine near here has some hives, and found the hens eating his bees. He says he watched them eating live bees. He opened some of them and found their crop full of bees. He killed many of his chickens in consequence.

John Murry.

[We should like to hear from others on this point. Has any one else noticed chickens eating bees?—Ed.]

Cincinnati, Ohio, Feb. 19, 1877.—"On the 10th inst., I overhauled my 26 stands of bees. They stand on my roof, protected in the same manner as they are in summer, *i. e.*, with a straw mat; only the second story was taken off, as usual, after the honey harvest was over. They have never given me 10 minutes labor since that time. All are acquainted with our severe and lasting winter. We had in Cincinnati 20 to 23 deg. below zero, several mornings. Now notice the result of my out door wintering:—Twenty-three stands had, on Feb. 10th, 1, 2 or 3 sheets with capped brood; two stands were numerous with bees, but I could find no brood or queen; it was getting late and I may have overlooked the queens. One stand had a leaky cover, the inside of hive was wet and mouldy and the bees had dwindled down. A few weeks will determine its fate; if its queen is alive yet it may get through as well as the rest. If brother Novice would take a look at my apiary at the present time, he would be saved a great deal of labor and vexation another winter, or I should be much surprised." C. F. Muth.

Woodville, Miss., Feb. 13, 1877.—"The peach and plum commenced blooming 4 or 5 days ago, the elm about two weeks since, and the maple has been blooming for sometime. Within the last few days I have seen two kinds of very beautiful blooming trees which I never noticed before, I suppose from the fact that the flowers all open at once and fall very soon. These trees look very much alike and the flowers, to a careless observer, are exactly alike—both are scarlet, minute in several bunches, but one is pendent, the other sessile. Both seem to be common, but they grow high. The stamens and pistils of the sessile variety are not conspicuous, the others are very minute. A friend tells me bees work finely on the pendent variety."

Anna Saunders.

Knoxville, Iowa, Mar. 1, 1877.—"In May, 1874, I purchased two colonies of Italian bees. Increased to 8, including 4 that I bought. I kept them in my cellar without loss. In 1875, increased to 22, with enough surplus honey for my own use. They wintered in the same cellar, which is very dry, with the loss of two weak colonies. I commenced the spring of 1876 with 20 strong colonies, and increased to 57. I sold 4, and now have 25 in the cellar and 28 on their summer stands. We have had a very severe winter up to Feb. 1st; during Feb. the weather was mild and sunny. I know that the 28 colonies out-of-doors are all alive, for they have been carrying pollen from rye flour on the nicest days. Of course, these 28 swarms were the strongest, and were well supplied with honey. I may loose some of those placed in the cellar, from weakness or other causes. If it is desirable, I will report success next month, and also describe my hive, which is double-walled, but not 'back-actioned,' and costs me 50c. each, not counting my own labor in making and painting. Tell Mr. Heddon to go on, I like to read his letters in the Journal; his head is 'about level.'"

A. M. Crosby.

[Shall be pleased to have your report and the description of the hive you are using, as suggested.—Ed.]

Trumbull Co., O., Mar. 5, 1877.—"I report for 1876, 11 stocks. On May 1st most of them were good; 3 strong and 1 weak. I sold $150 worth of comb and extracted honey at 30c. and 20c. retail, 25c. and 17c. to the store, 6 miles from here. Increased to 20; could have had 5 or 6 more, but returned them to other hives that had swarmed a few days before. Last winter I made a pair of scales out of some old carriage springs; they will weigh to an ½ oz. I put a good stock on it in the spring, balanced it with bricks, then used weights. The most gained in one day was 8 lbs.; there was some gain nearly all the summer. If they gained 5 lbs. through the day, they would weigh 1 ℔ less at sunrise. In Sept. I was taken sick and did not see my bees for 12 weeks, so I could not fix them for wintering as I wished. I got 6 put in the cellar, the others are on the stands packed with hay and chaff on top; they were all living a few days since. On fine days I take the hay from the front, and put it back in the evening. It has been a pleasant winter here, 5 or 6 below zero one or two mornings, was the coldest. We had plenty of snow, two months good sleighing, and fine during Feb. I live 2½ miles from the Pennsylvania line and 10 miles north of 41 deg. latitude. Our chief dependence for surplus is white clover." J. WINFIELD.

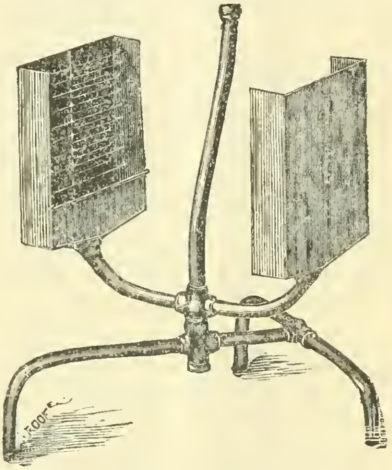
Fremont County, Iowa, Feb. 13, 1877.—"I have been managing my bees on the improved plan for 5 years. I started with 5 stocks, and at one time lost 17 by dysentery, and now have 50 stocks, besides some that I am keeping for neighbors. Last season was a poor one for honey. We got a little surplus from the linden bloom, about the middle of August. Honey was an entire failure. Bees that are properly cared for are wintering all right, but those on summer stands will suffer loss. I have part of my bees in cellar and part in an out-door shed, well packed with straw, quilts over the frames and caps filled with fine hay or chaff. All are doing well. We have no trouble to sell comb honey at 25c. per ℔, and extracted at 16c. to 18c. at home. We have an organization of bee-keepers in this county, which we look to for good results the coming season, but depend more on the A. B. J. than anything else. We lack bee forage here, as the wild flowers are mostly killed out; white clover and alsike failed, and buckwheat yielded but little honey."
JOHN H. MARTIN.

Cincinnati, O., Mar. 7, 1877.—"I wintered my 33 colonies on their summer stands without loss, and now that spring is putting in an appearance they are looking splendidly, with every promise of a good year."
R. L. CURRY.

Nashville, Tenn., Feb. 10, 1877.—"DEAR EDITOR: I commenced the year 1876 with 22 colonies; took 1,000 ℔s. of box-honey, and sold it at an average of 16c per ℔. My bees also gathered enough honey to winter on. There has been more cold weather in Dec. and Jan. than I ever witnessed before. My bees, thus far, have done well. For the last 20 days the weather has been fine. On Feb. 1st my bees were gathering pollen quite freely, and have been ever since. The queens are laying more freely than I ever knew them to, in this month, before. My bees are carrying in water from a watering trough near the hives. The thermometer this morning stood at 32 deg. It has been frequently as high as 70 during the last 20 days. I have a colony of black bees that I got from the woods in 1870, and, having watched it closely, I am sure it has never swarmed since. It has raised 3 queens in 7 years. It stands near a poplar tree, fronting the east, and is no more shaded than other colonies and has been treated the same. It gathers 50 to 75 ℔s. of honey a year. I have noticed my bees working in red oak sawdust, where we sawed the green wood; they preferred it after it dried a little, then they rolled themselves in it and gathered, in their baskets, a dark gummy substance. When first I saw it I thought that they wanted pollen, and I offered them wheat flour, but they did not visit it. They may have gathered it for pollen, but I do not think so, as considerable natural pollen can now be gathered from the willows. What do the readers of the JOURNAL think about it? It might turn out to be a benefit to us. Success to the JOURNAL." H. W. ROOP.

Johnson Co., Ind., Feb. 8, 1877.—"I saw an advertisement in the last issue of the A. B. J., of Hill's gas-pipe extractor. I expect to buy one this season, and would like some further description of it in the BEE JOURNAL." J. H. JONES.

[The frame being made of gas pipe, that gives it the name. It is made wholly of iron and tin, and weighs but 12 ℔s. This cut will give a good idea of it.



The comb holders are made of tin, with wires about ¼ an inch from the tin back, to keep the comb sufficiently far away from it to discharge the honey, and then it runs down to the bottom of these holders, and is carried by the pipe frame to the centre and there discharged under the frame. It has a crooked handle which serves as a means of whirling the holders of the combs.—ED.]

Jefferson Co., Ind., March 18, 1877.—"I have kept bees 45 years, and have 45 stocks now on their summer stands, in good condition. I use the Falkner hive, with 32 six-pound boxes. It is a good and durable hive. Our county bee convention is to take place on the 31st inst." A. WRIGHT.

Crystal Springs, Miss., March 14, 1876.—"My bees came through the winter in fine condition. On Feb. 1st, I found plenty of brood in nearly every hive, and on the last of Feb. I found many drones. The prospect is now good for some extra early swarms."
J. W. MCNEIL.

Wayne Co., Ind., March 18, 1877.—"Bees did splendidly last season, and so far have wintered well and without loss. I have 25 colonies in Langstroth hives wintered on their summer stands, with straw on the top of the hive." Wm. Kitson.

Barren Co., Ky., March 13, 1877.—"I went into winter quarters with 10 colonies in the Langstroth hive, upon their summer stands, with no protection, except the upper story of the hive being filled with straw. I have lost but two stocks, which I consider doing remarkably well, considering the excessive cold weather we have had. Bees commenced bringing in pollen about Feb. 10." E. G. Martin.

Springfield, O., Mar. 6, 1877.—"I have 35 colonies in good condition. They have been in a damp cellar during the winter, but I set them out a few days since, the weather being fine. I visited several apiaries last week, and most of the colonies are as yet in pretty good shape, but the weather is so changable here, that we cannot tell what a few weeks may do for our pets." A. B. Mason.

Leaman Place, Pa., March 12, 1877.—"The past season was rather a poor one for honey, and nearly all the bees in this neighborhood have died of starvation. In Dec. and Jan. it was very cold; bees consumed all their stores and became weak. Feb. then coming in almost like spring, the few that were left commenced to breed very rapidly, to make up the loss and consumed what little honey was left. My bees are in good condition, and strong in numbers; I lost but one out of 34 stands, and that one became queenless. I united it with another. I wintered on summer stands." Elias Hershey.

Hadley, Ill., March 19, 1877.—"I have 160 stands, mostly pure Italians, in good condition, so far. They did well during the past season. I want to say to friend Alley, through the Journal, that if he does not breed better queens than those he sent me, if he wishes, I will make him a present of one that will improve his stock. One of those that he sent me was dead, and the others raised nothing but drones of the blackest kind." F. Searles.

Barren Co., Ky., Mar. 10, 1877.—"My bees seem to be doing well, considering the unfavorable circumstances in which they were wintered—out on their summer stands without any protection whatever from the cold, which has been very severe. The mercury fell as low as 20 deg. below zero at one time. That was, I think on Jan. 9. I am manipulating 15 colonies; and I think for a man to undertake to manage bees without the assistance of the A. B. J., would be like a man traveling in the dark, he would be likely to fall at every move he made. We sometimes meet with men who are trying to manage bees with but little knowledge of the business, who refuse to take the Journal, relying entirely upon their own judgment.

"I think they'd better quit in time,
Raising bees and honey:
Pitch their tent in another clime
Here they make no money."

N. H. Holman.

Henry Co., O., March 17, 1877.—"This has been a hard month on bees—alternate gales of wind and snow. This morning the thermometer is 4 deg. below zero, with 18 in. of snow on the ground. Three-fourths of the bees on summer stands are dead, and there is a loss of 2 to 5 per cent. of those in cellars from starvation." D. Kepler.

Newton Lower Falls, Mass., Feb. 28, 1877. —"I have 10 colonies in box-hives, and are doing well. I intend to transfer them to movable-frame hives this summer. I purchased some of Mr. Coe, at the Centennial. The first I ever saw. Please give the best way of transferring them? How can I tell if any are queenless, and how can I find the queens?" G. J. Longfellow.

[Our friend should get Cook's Manual of the Apiary, or some other guide or text-book, where he will find the information he desires. We have so often given it, that we cannot find room for a repetition.—Ed.]

Boone Co., Ky., March 22, 1877.—"Bees never wintered better in this county than during the past winter. Stocks are healthy and strong, even in the old box hives that received no attention. The people are waking up to the importance of managing bees on intelligent plans. I know of more than a dozen men who are commencing the spring with the Langstroth hive, many of whom never saw a movable-comb hive until last summer. They are convinced that by having the Italian bee and good movable-comb hives and good management, bee-keeping does pay." J. T. Connley.

Atchinson, Kan., March 22, 1877.—"In the spring of 1876 I had 38 colonies; increased to 68. Extracted 4100 lbs. and got 500 lbs. of comb honey; making a little over 121 lbs. per hive. The honey was gathered from basswood and heart's-ease. The yield commenced the latter part of June and lasted about 6 weeks. My bees are in the cellar in excellent condition." C. W. Stokes.

Lawrence, Ill., March 12, 1877.—"I have 82 colonies in my cellar; they are in fine condition, with but few dead bees. There is not a particle of mouldy comb or a mouldy bee to be seen. I put them in the cellar on Dec. 1st. The thermometer at one time went down to 32 deg. at the bottom of cellar, and 36 deg. in the top. So I put in a ventilator made of 2 in. water conductors, running it from the centre of the bottom of cellar up to the floor, then through a partition into another cellar, then up the stove pipe. In 30 hours after I put it in I raised the temperature 4 deg., the weather outside being very cold. The thermometer to-day is at 40 deg., and everything lovely. I always winter in cellar, and think there is no place like it. We have a foot of snow now, and still it is snowing. Some of my neighbors put their bees on their summer stands in Feb., and they are there yet. I pity the bees." J. Lee Anderson.

☞ We can supply Comb Foundation, or machines to make it, early tested Queens or Colonies, all kinds of Smokers, Hives or Extractors, Seeds or anything wanted by bee-keepers at the lowest prices.

Correspondence.

For the American Bee Journal.

Improvement of the Italian Bee.

Had time and health permitted, this reply to Ch. Dadant would have appeared before this. I will write as briefly as I can. In vol. 12, page 205, Mr. Dadant says his ideas differ much from mine. Let us see wherein and how much.

When I made the statement that not much attention was paid in Italy to the improvement of the Italian bee, I had no idea of lesssning the merits of any one; I spoke, of course, comparatively. I never doubted but there were just as good and talented bee-keepers in Italy as in any other country; but is it the good and talented that breed, sell and export improved Italian queens? If Mr. Mona and others had paid as much attention to improvement as Mr. Langstroth and others have, there would not have been so many complaints about dark and impure queens; but in justice let me say, a dark Italian queen is not necessarily impure. Many, however, have thought so, from a want of proper knowledge of the origin and unstable character of them.

In order to show that I was somewhat justified in making remarks upon the backwardness of bee-keeping in Italy, permit me to give an extract from a letter written by one of Italy's talented men, Dr. Blomhoff; vol. 4, page 83:

"But alas, bee-culture is still greatly in the rear, in this country. Most bee-keepers have still no idea of the great advance made latterly in other countries, nor any conception of an improved system of bee-culture, founded on a rational mode of management. With few exceptions, they pay no attention to their bees, except during the swarming season. The swarms are hived and simply consigned to the care of Providence."

Now it was such testimony that induced me to say that Italy might with advantage come to America and take back improved Italian bees; as England had come here and taken back improved stock of her own breeds of cattle. As this reads in the *Bee-Keepers' Magazine*, where it was first printed, it is neither truth nor sense. Who is at fault I know not.

When I stated there were black bees in Italy, I had no unkind or selfish motive in view. I verily thought I was speaking the truth. Mr. Dadant says there are no black bees in Italy. Well, at the mouth of 2 or 3 witnesses, let every word be established. A. B. J., vol. 1, page 17, the Rev. George Kleine says:

"As early as the time of Aristotle the existance of the *two races* was known, and Virgil clearly describes the difference between them in the Fourth book of his Georgics. Varro and Columella also mention them; and at this day *both varieties* are met with in various parts of Italy. Mr. Deus, of Dusseldorf, found the orange-colored bees at Genoa, and the black in Nizzia. Spinola found *both kinds* in Piedmont, though the *common* bee was less frequent there than the *pure* Italian."

On page 213, same vol., we have an account of your German bee-keepers who made a tour through Italy, the writer says:

"On our arrival at Nizzia we were mortified to find only the *common* bee prevalent there. We were also repeatedly assured that the *common* kind only was found in the Kingdom of Naples and in the warmer districts of upper Italy."

Vol. 3, page 31, Von Siebold also believed that two kinds existed in Italy. He says:

"The statements which Varro and Columella have made upon bee-keeping, show that in Italy the gold-colored or varigated bees, and the unicolorous blackish-brown bees, occur together."

Vol. 8, page 86: Mr. Dadant was in Italy as late as 1872, he writes, "Sartori says that there is some black blood mixed with the Italian on the frontiers of Italy." Again, on page 87: "Sortori, who was born in the Tyrol, says that he does not understand why Uhle, who raises queens for sale, established himself in the Tyrol were the bees are as *black*, and as cross as hybrids." Same page, Mr. Dadant makes this remarkable statement: "I am now wondering why Mona wrote that all the bees of the Italian peninsula were pure Italian, when he ought to have known that there were such enormous differences in their color and character."

Now, is the above testimony sufficient to prove the truth of my statement? If not, then the witnesses must be impeached.

That the Italian bee is a variety, none, I think, will deny; but that it is a fixed variety, few will admit. Most of the intelligent German bee-keepers, and our own respected Langstroth, say it is not. Mr. Dadant's own experience, in his reply to my article, shows it is far from being very reliable. I have never seen a queen that would duplicate herself for any length of time. Indeed, there are few that have failed to see and lament the want of uniformity in their stocks. It was this that led me to look around for a cure, and I came to the conclusion that the improvement of our drones would, in a measure, in time remedy the defect. Why not? The males of all animals, the human being included, exerts a powerful influence on their offspring. Is the bee an exception? I think not. Mr. Dadant himself recognizes this principle in vol. 4, page 220, when he says:

"Furthermore, the best queen-breeders in Italy, living at the foot of the inascessible Alps, cannot meet the light color so fashionable in Germany. Their endeavors in this direction are always frustrated by the drones of their neighbors."

I agree with Mr. Dadant when he says that the matter of color can be overdone. I thought I was well guarded and plain enough to be understood, when I said the careful breeder can easily avoid this (too close breeding) by exchange or new importation. A noted poultry breeder of this country says: "There is but one way to reach uniformity in breeding, no matter whether it is horses, cattle or fowls, and that is by 'in-breeding,' and like poison it may kill or cure us just according as we display good judgment in its use."

I did not mean to be understood as advocating color at the expense of any other good quality. I distinctly said that it would be an advantage if we could work for (or keep up) all other points at the same time. It would indeed be very unwise to let any point run down, in order to obtain another of less importance. I fully agree with Mr. Dadant, when he says: "that bees are not only kept for color but for their qualities as honey gatherers."

I gave prominence to color in the drone, because it is a subject little spoken of and less practised in breeding, and I was satisfied that by using our best-colored drones it would have a tendency, in some degree, to fix the markings of a very unstable race. It was this drone subject that formed the burden of my article, and the only point that he failed to notice. Again, he does not concur with me when I say "that queens are *always* prolific enough when the conditions are all right." I do not think Mr. Dadant shows a very commendable accuracy in making this quotation. I said, "As a rule queens are prolific enough;" and I know many old bee-keepers who think so too, and as soon as an unprolific queen is discovered she is as soon as possible replaced by a better.

In conclusion I would say if any one works for prolificness in his queens, energy and mildness in her workers and color for all, he is on the right track. How much do we differ? I hope from the above I shall be better understood. GEO. THOMPSON.

* * *

For the American Bee Journal.

Our Resources for Honey and Pollen.

We have several varieties of the willow, the earliest one beginning to bloom as soon as the weather becomes warm in the spring; even in winter, during a warm season, it will commence to bud. Willows are in bloom here from the beginning of April till the middle or end of May. They yield an abundance of pollen. Some honey is gathered at the same time from the bloom of elms or soft maple.

Sugar maple comes next, but there is not much in this vicinity.

White oak and similar trees are abundant here. Last year I found my bees getting pollen in large quantities from the tassels, 1 to 2 inches long, that hung in bunches on the oak. It was of a brown color.

From the apple bloom bees gather considerable honey, of a fair color and medium quality.

Red raspberries bloom in the latter part of June, and give honey for some time. It is clear and the quality good.

White clover is abundant here nearly the whole season, but bees work on it very sparingly.

Motherwort and catnip blooms for a long time, and bees work on it from early morn till night. It is not plenty here.

Thorns of various kinds are abundant, and are covered with bees when in bloom.

Mustard makes excellent pasturage. By sowing both black and white mustard in the spring, and some later, it produces good pasturage for some six weeks. The white blooms first and lasts about 15 days; then the black comes (about July 1st) and lasts about a month. Bees work on the white all the forenoon, and on the black nearly all day.

Basswood (linn or linden) is plenty and blooms from July 10 to 15, lasting 8 or 10 days. From this we get our largest yield and best quality of honey.

Red and alsike clover bloom about the middle of June, and last 15 or 20 days, until it is cut. Neither of them yield much honey here.

Corn tassels produce pollen. Pumpkins and squashes produce considerable honey.

Golden-rod is plenty, and yields a little honey here for a long time.

Buckwheat yields honey in the forenoon during August.

Wild flowers also yield honey to some extent here. S. K. MARSH.

Ionia Co., Mich.

* * *

For the American Bee Journal.

Winter Transfering.

On Jan. 4th, I was asked by a friend if I would like to cut a bee tree. Of course, I was delighted to hear of such a treat. On the next day I went to his house, situated in the centre of the city. I took a hive with some empty comb, and he informed me that the bees were in the next house to his. It was very cold, and they could not fly. I found them between the plaster and the siding boards. I took off some of the siding boards, which exposed the bees and comb to view. I carefully cut out each piece of comb and shook the bees into the hive, and gave my friend the honey, as I only wanted the bees to experiment with. On the second comb I found the queen and some brood. I put this piece with queen and all the bees into the hive, and placed them in the cellar the same night. I then fastened the piece of brood into a frame, the same as transfering in June, and gave them some cards of honey and pollen, and a week ago I had them out for a fly and found them in splendid order, and the queen laying.

W. G. WALTON.

Hamilton, Ont., Feb. 19, 1876.

* * *

For the American Bee Journal.

My Experience with Bingham Hives.

Many ask: "How long can bees live in a healthy condition, shut up by cold weather?"

Some of ours were under snow 3 ft. deep. We had near 100 swarms put away for winter, all on their summer stands but 4, which were in the cellar. All came out, so far, in good order, except one in a box-hive that smothered by—well—carelessness, that's the truth of it. I covered a board sloping over most of the doorways to keep the snow and wet out, but neglected that one. I pack with chaff. I use the Bingham hive mostly; have a few Langstroth, some single, some two-story, and 3 old *barns*, I call them—deep hanging frames.

I prefer the Bingham hive. It is a complete hive, and not as a writer in the A. B. J. says, "three little sticks," etc. I use it the way it was meant to be used by Mr. Bingham. It is the leading hive in Allegan County. Its chief advantages over the Langstroth are: 1st.—It is much easier to manipulate in every way. 2nd.—It is much safer to winter in on summer stands. 3d.—It is more likely to produce a good average yield of honey, either large or small apiary. 4th.—It is less liable to get "millered up."

As the whole set of frames are clamped together, by taking off the wire clamp at each end, leaves is free to be opened in the middle of the hive or anywhere, without crushing the bees. It is also very convenient to set a nucleus, by simply taking the front and back off the inner hive, and set them up with as many frames as desired between them.

It is very convenient to "pile" or "sling," as one set of frames can be set on top or under another set, or can be taken off and put on honey boxes.

It has an outer case with plenty of room to pack around the frames, as well as over and under, and double entrance, too.

The honey boxes set close over the brood chamber, where they should be.

There is no spot a worm can hide inside, not readily accessable by the bees; as under the ends of frames, or between frames and surplus boxes in Langstroth hive.

My best swarm in the Bingham hive gave 14 boxes full—5½ to 6 lbs. in a box—and several scraps and spare frames of brood. My poorest—a late nucleus swarm—nearly filled their hive, by being helped some with comb and brood. My best in the Langstroth gave 5 boxes full and 1 scrape. My poorest gave nothing, and eat 4 frames of honey.

The honey season was the poorest ever known here. JOHN O. SHEARMAN.

Allegan Co., Mich.

For the American Bee Journal.

Natives vs. Italians.

I find in the last issue of the JOURNAL an article from friend Miller on the respective merits of native and Italian bees. I think his comparisons prove nothing from the fact that several miles interview between his apiary and those he compares with; for as we all know that 4 or 5 miles makes nearly as much difference in the value of an apiary as in that of a farm. Allow me to state a few facts and then people can draw their own conclusions.

When I first came to this place, 14 years ago, I purchased 8 stocks of native bees and a lot of Langstroth hives; but after trying 3 years, I sold my hives to a neighbor who was meeting with success, and I had three stocks in box hives as the result of my enterprise.

In 1868 I determined to try the Italians, and obtained of M. S. Snow, of Hanover, one stock, by express, which was so much injured by the agents' careless handling that they did not swarm that season. In 1869 I purchased of Mr. Snow five more, so I commenced the spring with six rather light stocks, while a neighbor about 80 rods from me had 30 stocks, and was considered the bee man of the town. I was surrounded by ten others who had from 1 to 4 times my number, so you see it was impossible to keep pure Italians.

Now for the result. In this part of the country 1869 was a cold, wet season. I did not feed any until autumn, and my first swarm came off just three weeks earlier than my neighbor's. Neither of us got any surplus honey. My 6 increased to 13; his 30 increased to 37. The next spring I had 13 stocks of Italians, but one proved to be queenless, and 2 of the 3 stocks of black that I had left, died. My neighbor commenced the season of 1870 with 30—his original number. In 1870 and 1871 my first swarms issued about 5 weeks earlier than his first. At the end of the third season I had more bees and surplus honey than this neighbor. It will be remembered we were side by side, only about 80 rods apart, and he experienced; I not experienced, and a failure with native bees. To-day there are not 80 stocks of bees within 3 or 4 miles of me.

I admit that friend Miller for the past two seasons has been more successful than me. But let us look at the subject a little. He tells us that long before I commenced with my 6 Italian stocks he had 50 blacks (I understand he had at one time 100), and in the fall of 1874 I had 124 stocks, while he had only 27. He makes a slight mistake in the next statement. I sold 4, put about 60 in cellar and the others (except one in double-wall hive) in bee-house with 4 in. walls filled with tan bark. The winter was extremly cold, and cellar contained frost a long while, and the house was frosty nearly all the winter. When I took them out in the spring, 8 or 10 stocks were quiet, but most of them seemed to be strong in bees, and as we had splendid weather the first part of April, I thought they were all right, but those who read "Sad History," in the June number, 1875, will remember the result. I have a theory which I think accounts for it, it is this: The cellar and house were so cold up to about the time of putting them on their summer stands, that no young bees were raised, and the old bees became so diminished during the warm weather that they were unable to withstand the cold that followed. One neighbor lost all he had; another thought he had wintered 30 out of 32, but finally came out with 12. I had but 42 that were good for anything; 40 lived through the summer, but only 26 gave any surplus, from which I got a little over 900 lbs. of box honey. I think Mr. Miller's bees must have been in much warmer quarters during winter than mine.

We see from reports in the JOURNAL that location makes a great difference with surplus honey. The past season in some localities was the best, and in others the poorest for years. Mr. Miller says that June was splendid, while only 15 miles west the ground was parched with a drouth and bees did nothing until about July. We had a light rain on June 27 which made the parched fields put on a green appearance, and set our pets humming, and on July 4, we had a splendid rain which helped so much that from 50 stocks I got 1200 lbs. of box honey, although in June it looked as though I would get none. I think one needs two hands to run an apiary for extracted honey, and as I have lost the use of my right hand, I shall have to stick to the boxes, but I would like a cheap extractor to extract honey in the combs of partially filled boxes, if there is one adapted for that purpose. H. B. ROLFE.

For the American Bee Journal.

Bees of the same Colony Fighting.

On page 47, February number, R. C. Cameron makes a statement of his experience in this matter, and Ch. Dadant says in answer that he never knew of bees of the same colony fighting each other. I have known of many such instances and will give the reason. Queens should not be handled at any time, if it can be avoided; as they are liable to contract an odor from the hand, and sometimes from the cage, that their own bees mistrust the queen not to be theirs, and kill her; and all bees that have come in contact with her are liable to be killed also. Bees sometimes receive an objectional odor while out at work from the hives; on their return they are set upon by the bees and killed, and in turn the ones that come in contact with her are also killed. During the confinement of a caged queen, a fertile or other worker may have been acknowledged, and a fight of factions may have taken place on being liberated; of course the perfect queen would be the favored one kept.

A number of workers may have received an odor from the strange queen or cage, and be killed by others, thinking them to be strangers, from the odor of the queen or cage, or the poison pressed out on them if any tight clustering was done. A virgin queen, or one not fully laying, will sometimes kill bees that come to her with hostile intent. I have seen a queen kill a handful of such bees. A queen can, and sometimes does, kill more bees in one minute than two workers can. Why? She is stronger, quicker and more perfect than the workers. Her sting is already curved, saving time.

Remedy.—Feed largely of highly-scented feed, until subdued; or take away their stores, smoking and scaring them. Then return the stores and they will be under control. J. M. Marvin.

St. Charles, Ill.

For the American Bee Journal.

Italian Bees.

A correspondent (P. Miller) in the March number of the Journal gives his opinion that the Italians are not better than the black or native bees. His opinion does not agree with most of those who have had them. I do not understand that Mr. M. has tested them himself, but has taken other peoples' word and management for it. The facts which he gives proves nothing either for or against the Italian bee.

I have charge of a few colonies that are situated some miles from where I live. Not having time last fall to prepare them for wintering on their summer stands they were left to get through the best they could. They are all Italians but two stocks. The last time I saw them, all the Italians were alive and in good condition while the two black stocks were nearly all dead. The black stocks were fine ones in the fall and were well stocked with bees and honey, in fact they were as good as any stocks in the lot. Last season the Italians did much the best in storing honey in boxes.

Now, I claim that the Italians are much the best in many very important respects. It is well known that they are not so cross as the blacks, and that fact alone should make them more valuable than the natives. They are much easier to handle than the blacks in any operation. I know from experience that the Italians will gather enough to live on through the winter, when the blacks won't, even with the same chance of doing so; thus proving that they will work upon flowers that the blacks pass by or cannot gather honey from. Neither is this all the claims they have over the black variety. They are much more beautiful to look upon, and one can go much nearer the hives to watch them at work than to the hives of black bees. What looks more beautiful and pleasing to the eye than a hive filled with new white comb and honey and a full stock of pure (yellow) Italian bees? Such harmless pets are much the best to have, rather than the cross blacks that one can't go near without being stung. We never found any more trouble in wintering the Italian than we have the blacks, in fact we have no trouble at all, so far as the bees are concerned.

A Lover of the Italians.

For the American Bee Journal.

Comb Foundation.

While at Shreveport last year, in charge of my bees, there Mr. Perrine paid me and my brother a visit, and remained about a week. He brought with him a few samples of comb foundation—most of it being made of pure wax and the balance of both wax and paraffine. We quickly used up these samples in divers experiments, and then telegraphed to Chicago for 10 lbs. of yellow and 2 lbs. of white wax. Being delayed somewhere on the route, it did not reach Shreveport till after Mr. P. went away. It was arranged, however, that we should get the foundation as soon as it arrived, and use it up in experiments, and then report the result. It was to be used as follows:

1st. By filling the frames and section boxes nearly full, leaving a space of about ½ in. at the bottom, and ¼ in. at each end. This was to allow for stretching and expansure, so as to guard against bulging.

2nd., In strips of various lengths and widths, all the way from ½ to 3 in. in width and from 1 in. to full length of frame or section, when used in short pieces, one or more to be used in each frame or section.

Without detailing the experiments, I will give some of the results:

When frames were filled nearly full of foundation and hung between natural comb, they were quickly built out and occupied with brood. The combs were even and nicely built, and free from drone cells. But we did not think it would pay in the South, where comb-building appears to be more rapid than in the North, to give $1 per ℔ for foundation and fill the frame full. At 75 cts. per ℔ it might pay, and I should be strongly inclined to use it at 50c. to 60c. per ℔. I found the yellow wax better every way than the pure white. The foundations made in part of paraffine are of little value, as they stretch and otherwise get out of shape too much.

The foundation is truly valuable when used in strips or short pieces as starters. In the large frames I found it better to use three pieces about 2 in. long, than one strip the whole length. By using three pieces the bees will generally start their combs in three places, this is a great advantage in getting straight combs. The middle piece should be as near the centre of the frame as possible, and the others from 2 to 3 in. of each end. The pieces should be about 3 cells or ½ in. wide. Were I to use long strips for swarms, should want them from 2 to 3 in. wide.

For section boxes, one piece in the centre, about 2 in. long and ½ in. wide, is better than 2 or 3 pieces, each 1 in. long. The piece in the centre indicates to the bees just where to commence, and the combs are built much better than when 2 or 3 pieces are used. This piece may be cut the shape of a triangle, say 2 in. long and ¾ in. wide at the point. I used natural comb as starters in the majority of my section boxes, but would have prefered yellow foundation. In fact, I would rather pay $1 per ℔ for the foundation starters than use the natural comb free of cost. The foundation starters can be put directly in the centre of the frames, but this cannot be done so accurately with natural comb. I find no objection to the color of the yellow wax starter, as the bees quickly bleach it to a snowy whiteness.

The best way to fasten the starters or foundation to the top-piece, that I have tried, is to lay it down flat with one edge very near the centre, and then crush down one row of cells to the wood with the end of a putty knife; a common case knife will do nearly as well. To keep the blade from sticking to the wax, wet it frequently by dipping it in honey. This must be done in a warm room or place. When mashed down, run the flat side of the blade back and forth along the pressed wax, and it will adhere to the wood as firmly as you may wish. Now lift up the other edge of the guide until it hangs in its proper place. A boy or girl will soon learn to fasten the starters in quickly. M. M. Baldridge.

St. Charles, Ill.

For the American Bee Journal.

My Mode of Preparing for Winter.

By this day's Express, I send you a hive of my own invention, and a smoker. I send them to you, so that the many bee-keepers who call at your office may examine and give their opinion of them. I have been questioned much concerning the hive, and its construction and adaptation to wintering bees. I have not lost a single colony of bees as yet in this hive, in 5 successive winters. If my method is fully carried out, there is no need of losing a single colony. I double up all my small or weak colonies and make them strong, then I provide passages through all the combs, so that the bees can have access to their stores. The hive is so constructed that the back end of the frames do not come in contact with the back of the hive, and for fall management, or preparing the colonies for winter, I open the back door; after the removal of honey-boxes, I take a blanket and drop it down to the bottom of the frames, then fold it over the top of frames. I also remove all of the combs that the colony does not cluster between. This preparation for wintering should be performed after three or four hard frosts, which compact the colony; then it is a small matter to perform the work.

After removing the spare combs, I drop in the movable division-board and pack the empty space with straw or hay; tuck the blanket down tightly, so as to avoid all draft of air through the brood chamber; place the surplus boxes on top of quilt, and put on the cover. If the entrance has been enlarged to the full width of hive, place the entrance board so that the colony has but two holes for ingress or egress. This is fall management. The colony needs no more care until winter has begun in earnest. In the Northern States it commences about the 1st of December, then if the colonies are to remain on their summer stands, the lower passage should be contracted to only one hole, which is in my hives about 2 in. long and nearly ¼ in. high. Open the upper entrance in front. This allows all foul air to pass off without giving a direct current of air through the brood nest. In case of protracted cold weather there is no danger of the bees becoming covered with ice or frost. In case the bees that drop to the bottom fill up the lower entrance, the colony is in no danger of being disturbed or smothered.

For wintering in cellars, instead of leaving the upper entrance entirely open, only turn the perforated end of the tin over the entrance, so as to exclude mice, reverse the entrance board and close it down to the proper height.

My hives are made with and without bottoms, just to suit the fancy; I prefer them without. I have wintered bees successfully both in the cellar and on summer stands, but prefer to winter on summer stands.

Last season was a poor one for honey. I commenced the season with 32 colonies, and increased to 67. I have taken 1,500 ℔s. of honey, besides raising 72 pure Italian queens. In 4 years I increased from 4 to 67 colonies, all in good condition at this date, except 6 which perished for want of care while I was absent from home. I was absent from the early part of winter to Feb. 1st.

The smoker is one of my own make, but not of my invention; that honor belongs to Mr. Quinby. I think it a much better article than his. L. J. Diehl.

Butler, Md., Mar. 4, 1877.

For the American Bee Journal.

Weather Report in La.

I give here our temperature for February. All can see how even it has been. We always have a breeze, and unless marked with v. s. or s. or m.,—very strong, strong, moderate—it is only a breeze.

Day.	7 A. M.	12 M.	6 P. M.	Wind & rain.
1	58	75	65	S. E.
2	58	75	65	S. E., m.
3	52	55	53	N., s.
4	50	53	53	
5	52	62	58	N., s.
6	48	62	52	N. E.
7	47	62	60	N. E.
8	48	62	55	N., m.
9	48	62	55	N.
10	48	62	55	N., s.
11	50	68	58	N., m.
12	50	68	62	E., v. s.
13	55	60	55	N.E,m, rain
14	53	53	53	N. E.
15	50	52	50	N., s.
16	45	47	49	N., v. s.
17	45	50	50	N., s.
18	38	52	52	N. E.
19	45	66	62	N. W.
20	38	52	52	N. E., s.
21	46	54	52	E., ¼ rain.
22	48	55	52	N. W.
23	46	55	50	S. W., s.
24	42	53	53	S. W., m.
25	44	55	52	N. E.
26	42	52	50	N., m.
27	46	56	53	N. E.
28	50	60	56	N. E., s.

New Orleans, La. W. B. Rush.

North-Eastern Bee-Keepers' Association.—Tabular Statement of Operations for the Past Season.

NAMES.	SUCCESS IN WINTERING.					SUCCESS OF THE SEASON'S OPERATION.												
	No. of St'cks					No. of Stocks		In fall				Am't of honey produc'd						
	Fall, 1875.	Spring, 1876.	Condition in Spring.	Where Wintered and the Average Temperature.	Manner of Wintering briefly expressed.	Spring, 1876.	Fall, 1876.	Italians.	Blacks.	Name of Hive.	Number and Size of Frames.	Box.	Extracted.	Amount of Wax.	Extra Italian Queens.	Principal sources from which honey was gathered.	Average value of the honey season.	Amount of sugar fed, fall, 1876.
C. R. Isham	..	...	....	....	....	60		....	.	....	....	3,600	.....	..	...	....	..	....
D. H. Van Alstine	60	53	mi	Out-doors	Large hives pack'd in straw	53	61	10	m	Side Boxing	8 frames, 17¼x10¾	6,200	300	15	10	Berry,clo, lin,bkw	Ord.	....
D. E. Floyd	45	41	m	In cellar, 38	See fig. 2	41	72	m	xd	Convenient	8 fr, 11¾x15⅞	1,540	396	10	...	W.clo, lin, buckw.	Good	....
John Floyd	58	54	m	In cellar, 46	No preparation	54	77	mi	xd	Convenient	8 fr, 11¾x15⅞	2,600	1,200	15	.	Willow & do.	Good	....
F. H. Cyrenius	24	21	g	Out-doors	Figure 3	24	35	20	15	See fig. 4	6 to 18 fr, 10x18	300	700	5	10	Berry,clo, lin,bkw	Ord.	....
I. L. Scofield	60	60	g	Cellar, 42	Quilt over frames	60	90	90	...	Langstroth	10 fr, 8¼x17	6,780	1,340	..	64	Clover, buckwht.	Good	....
M. H. Tennant	62	53	m	House, 40	Close top, ventilate 4 sides.	53	104	....	104	Union	8 fr, 10x17	6,250	....		100	Clover, linden	Ord.	....
L. C. Root	132	122	m	Cellar, 48.	Figure 5	132	185	93	92	New Quinby	7 fr, 11x19½ ....(fig.6)	4,000	6,000	..	50	Clover, linden	Ord.	....
G. M. Doolittle	100	67	m	Part Cellar, 42	Fig. 7	67	106	106	...	Gallup	9 fr, 10¾x10¾	2,994	356	25	50	Basswood	Poor.	....
E. D. Clark	37	28	m	Cellar, 42.	Pillow on fr.,entrance open	46	79	25	m	New Quinby.	6 to 8 fr, 11x18½	1,600	150	10	20	W. clover, bassw.	Poor	25
E. F. Wright	45	32	g	Cellar, 35.	Board on top, sealed up	35	79	25	44	....	8 fr, 11x17	2,500	....	15	...	W.clo.bass,gol'rod	Ord.	....
C. D. Jones	42	40	g	Cellar, 42 to 45.	Quilt on frames	40	50	25	25	.... King and	Langstroth	2,700	200		...	W. clo, buckwh't.	....	...
J. E. Lloyd	48	42	m	Out-doors	....	42	77	2	75	Farmer's F'nd	13 fr, 9½x11	1,731	...	42	...	Berry,bass,buckw	Poor.	....
Dr. A. H. Marks	65	50	m	Cellar, 40 to 45.	Open top and bottom	50	73	25	48	New Quinby	8 fr, 11x17	2,000	350	..	10	W. clo, basswood.	....	....
A. J. Tiffany	35	33	g	Out-doors	Quilt on frames,	33	59	10	46	....	8 to 11 f,15x11,& 11x11	900	.....		.	Basswood	.....	....
D. L. Betsinger	20	19	g	Out-doors	Straw mats, holes in comb	19	35	. .	35	Langstroth	9 fr, 10x16½	800	....	..	..	W. clo, basswood.	Ord.	....
Geo. W. Battey	87	87	g	Out-doors	Carpet on fr., straw in caps	87	121	24	101	fig. 8	8 and 9 fr, 12x14	2,000	200	..	30	Clo, linden, buck†	Poor.	....
W. V. Bosworth, jr.				Beginner	....	10	21	m	.	Langstroth	9 fr, 10x16½	60	12	..	...	Bassw,wild flowrs	Poor.	....
Daniel Marsh	32	29	g	Warm Cellar	Fig. 9	29	51	8	43	fig. 10	....	800	.....		...	Clover, basswood.	.....	....
W. A. House	177	167	m	Bee cellar, 44	Various methods.	142	294	(fig	11)	House Impr'd	8 to 11 fr, 11½x11½	4,000	....	10	..	Clover. lin,sumac†	.....	....
J. P. Gardner	3	3	g	Out-doors	Cover packed with straw	3	6	m	1	Langstroth.	8 and 9 fr, 9x17	91	132		...	Sweet & wh. clov.	.....	....
N. N. Betsinger	212	165	m	75 in Ho., fig.12	....	165	200	200	.	Betsinger Imp	8 fr, 9x14½.	4,000	. ..	..	.	Basswood, teasle.	Poor.	....
C. P. Cowles	7	7	m	Cellar, above 32	....	7	10	....	10	Langstroth	10 frames.	200	.....	20	..	W. clover, linden.	.....	....
R. Bacon	130	118	m	Winter,B Ho,38	1 to 6 in. chaff on frames	80	150	4	146	Green's	8 fr, 9x17	3,423	639	17	...	W. clover, buckw.	.....	....
J. A. Burdick	27	18	w	Out-doors	Little upward ventilation.	18	26	26	...	Sisson	8 fr, 12½x12½	48	594	5	12	Basswood.	Poor.	....
Julius Hoffman	140	130	g	100 in cellar, 35	D'ble-wall hive,no top ven.	130	230	50	m	Double wall.	10 fr, 11x13 high	8,456	1 200	10	...	Clover,bass,buck.	Fair.	....
J. H. Nellis	48	32	w	Out till Jan. 6.	Cellar, no protection	42	61	61	...	Old Quinby	8 fr, 11x18½	...	2,111	8	350	Clo, linden,buck.†	Good	....

EXPLANATIONS.—Figure 1.—m, medium; g, good; w, weak. 2.—About Dec. 1, we choose a cool day. As our hives are bottomless, we set them on shelves, letting them project off 2 inches. Give ventilation at top, and leave alone till March 15. 3.—Chaff on sides and top, 3 to 6 inches thick. Slots for boxes left open. 4.—Old style Quinby frame with removable inner part. For box honey, 6 frames; for extracted, 18 frames. 5.—For winter, put the frames on small bottom-board. Put quilt over frames. 6.—For box honey, 7 frames, for extractor, 16 frames. 7.—Those out-doors, caps packed with straw; in cellar, quilts over frames. 8.—A modification of the Langstroth with the Quinby box-hive. 9.—Three half-inch strips on frames, three thickness of carpet over. 10.—Two kinds, the Langstroth and a square hive, 9 to 11 frames, 11½x12 inches. 11.—One-third are Italians, balance mixed. 12.—Those in house, could fly when they wished. Those out-doors, entrance contracted and kept covered with snow. †—Also blossoms.

J. H. NELLIS, Sec'y, North Eastern B. K. Association.

For the American Bee Journal.

An Injustice.

I was quite sorry to see in the Secretary's report of the proceedings of the Michigan State Bee-Keepers' Association, the statement that "the subject of 'Humbugs' brought out many severe criticisms on Mr. A. I. Root's method of doing business, from those present, it being claimed that he had misled more people and had been the cause of more failures than any other person in America." While such criticisms were pronounced, they were by no means the voice of the Convention, and it is but doing justice to Mr. Root and to some "of the members present" to say that there were strong remonstrances against such arraignment.

One may have his likes and dislikes; his opinions and prejudices; he may think another has injured him or his interests, but, in my opinion, it is entirely out of place to bring such personal matters into the discussions of a body like our State Bee-Keepers' Association, and it is equally out of place to introduce them into the report for the columns of the JOURNAL. Though I would not like to have it thought that I wish to lay claim to a knowledge of just how the duties of the officers of such associations should be performed, still I wish to state that I have been accustomed to think that, in the performance of all official work, strict impartiality should be preserved—that, in fact, the ability to pursue such a course should be ranked as one of the first and most essential qualifications for office.

I dislike to write on such a subject because Mr. Burch, the Secretary of the Mich. State B. K. Association, and I, have always been on the most friendly terms. But since the words above quoted appeared in the report of the Convention, without the "other side" of the matter, this explanation was called for. FRANK BENTON.

[This article was written for the February number, but was unavoidably crowded out.—ED.]

For the American Bee Journal.

Comb Guides.

Take a Langstroth frame and lay it bottom up on a table before you; take a piece same size as top bar and lay it close by the top of your frame on the table; then take another bar same size and cut it so that it will fit inside of the frame. Place it so that the edge will come to the middle of the frame, less 1-16 of an inch. Press bar No. 2 close against the frame (laying flat on the table), then take bar No. 3 (called top bar) and place it on the frame and bar No. 2 and let the edge come to the middle of top bar of frames, less 1-16 of an inch, nail No. 3 on to No. 2. Have melted wax ready; call No. 2 and 3 nailed together, the mould; wet the mould in soapy water—quite cool. Take the frame in the hand; put the mould on; hold it down with the thumb; elevate one end of the frame, and pour wax on the highest end; raise one end of the frame just so that the wax will run to the other end. The frame should be leaned to one side just to form a triangle gutter, or so that when the wax is poured in, it will stand thus—Λ. What is wanted is a streak of wax an inch thick, where it is joined to the top bar, and hanging down from ¼ to ⅜ inch. Make one and perhaps you can describe it better.

The bees will work the wax out and make comb of it, always straight. It does not cost half as much as wooden guides and is as good as a 2-inch strip of comb guide—artificial—while it is one-fourth cheaper and more easily put on. Have put on 600 in 10 hours. W. B. RUSH.

New Orleans, Mar. 1, 1877.

For the American Bee Journal.

Bee Hives.

MR. EDITOR:—I read your remarks on page 84, March number of the JOURNAL, concerning T. S. Bull's bee-hive. You say that it is not patented and we can criticise as much as we please. Here are a few questions: What is there new about it? What advantage has it over others, almost precisely like it, that have been used for years? What is there about it that is not or has not been patented? I am of the opinion that on some of its featnres there is still valid patents. The frames are no new thing; that they are hung on the rabbets is not new, and I think that a Vermont man has a patent claim on that part of it; the hanging of the bottom-board at the rear end is not new, and a nuisance any way. There is nothing new about the boxes, honey-board, etc., and in fact I fail to find anything new about it at all.

ONE WHO KNOWS.

For the American Bee Journal.

Dysentery.

HOW TO CURE IT, AND AT THE SAME TIME TELL WHETHER A HIVE IS QUEENLESS OR NOT.

Bees in this section have had considerable dysentery this winter. Friends Johnston, Waterhouse, and myself have cured ours by giving each swarm some water in little wooden cups, made of maple, by taking 2½x2½x1 in. cut out with a 2-in. centre-bit. Place one at the entrance of each hive and fill them with water, say once each week, if required. We have had them out of the cellar twice and gave them a good fly, and they are now all right. If we found any of the cups with but little or no water taken out, we took a piece of chalk and marked that stock, QUEENLESS.

The water keeps them quiet; when they are breeding fast, towards spring, they require a large amount of water for the young bees, and when they find it they seem quite contented. These wooden cups are very much cheaper and cleaner than sponges, and I think the bees like them better.

W. G. WALTON.

Hamilton, Ont., Feb. 19, 1877.

For the American Bee Journal.

Chips from Sweet Home.

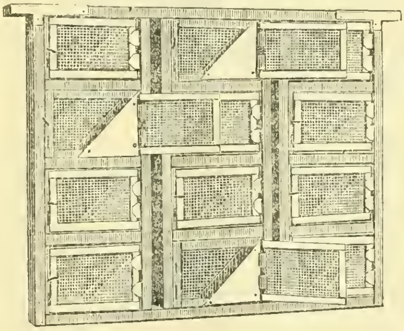
I have all the comb I want for starters; all I can well use. I watch all new swarms and take out nearly all drone comb. I use the Harbison sections and like them better than anything I ever saw. These sections hold from 2 to 2½ lbs. I shall do but little slinging in the busy time. In the fall I shall sling out more or less, depending upon price of either. Slung honey I sell at home—last season at 15c.; box honey, 20c. At those prices slung honey pays best, and so far I have had no trouble to dispose of all, although a good deal was traded for articles that I would otherwise have paid cash for. We are having a warm spell of weather for this month, from 30 to 50 deg. All bees in cellar, except 7, appear right—no disease. J. H. Thomas, of Brooklin, Canada, invented and patented a bee-house, similar to those much-talked-of now, 15 years ago; so the house apiary is not a new thing.

D. D. PALMER.

For the American Bee Journal.

How to Italianize Blacks, Introduce Queens, and make New Colonies.

MR. EDITOR:—Permit me to call the attention of your readers to the utility of the queen nursery in making the above changes in converting black bees into colonies of Italians. This we do by the use of the queen nursery, in the following manner:—Put into the cages of the nursery, between the tins, a few cells of sealed honey, in new comb if possible. Then cut from the combs of a pure Italian stock as many queen cells, large, and well developed, as you have prepared cages with the honey, as above. Suspend one of the cells in each of the cages.



QUEEN CAGES.

Good care should be taken to have the best cells, and not injured by bruising, handling or jaring. Having thus supplied each cage of the nursery with a queen cell and feed. The feed is thus supplied so the young queens will not starve if the bees do not feed them—a thing they often fail to do when there is a scarcity of honey in the flowers. The nursery cages so prepared are adjusted in the nursery frame. Then having removed a centre comb from a strong black colony, we place the queen nursery into the vacancy made by the removal of the comb, there to remain until the queens are hatched, which will be in 3 or 4 days, if the cells were not cut from the combs too early, or before the 9th day.

When the queens emerge from the cells, each cage containing a virgin queen is removed from the nursery frame and placed in one of the adjacent combs of the same colony, on either side of the nursery. The cages are so placed in the combs by cutting out a piece among the brood just large enough to receive a cage in each. Now go to other colonies of black bees, and take out two combs filled with brood and honey, brushing off the bees back into their own hive, place them in a new hive far enough apart to receive another between them; open the nursery hive and lift out one of the combs with cage and virgin queen and all the adhering bees, and place it in the new hive, between the two combs thus prepared to receive it, immediately closing up this new hive. And so proceed until you have made as many new colonies as you have virgin queens in the cages. On the next day, near sundown, open the hives and liberate the queens. Before doing this, you can, however, spray the bees and queens with perfumed sweetened water, so that the bees will have something to do while their ladyships are going at liberty among them, but we deem this seldom necessary, except at times when the bees are not gathering honey liberally, and are cross.

These new colonies are built up into full strong ones by adding combs of brood from the black colonies, always brushing off the bees back into the old stands, so no strange bees will be added to the new ones, except the hatching brood, and these will not interfere with the queens. By the above it will be noticed that the virgin queens are not placed in jeopardy among strange bees, but are set at liberty among those with whom they are hatched, and being of the same scent are kindly treated. It should be noted that you must be careful never to introduce an old queen into the new colonies among the bees on the combs containing the caged virgin queens, or they may be killed when set at liberty. It should be further noted that the addition of brood combs are better made after the young queens are fertilized.

By so using the queen nursery the loss of many queens is avoided and many queen cells saved from destruction, and an apiary of black bees Italianized. The cages can be removed from the new colonies within two days after the queens are liberated from them. Notice while removing the cages that the queens are all safe.

Another plan is to liberate one virgin queen after another from the cages, as the one preceeding is fertilized and removed from the hive, until all are fertilized and introduced into new colonies. This plan requires more attention, and from my own experience I choose the first plan. It does not require the queens to be confined so long.

JEWELL DAVIS.

Charleston, Ill., March, 1877.

For the American Bee Journal.

Life Insurance.

I am in favor of the insurance scheme, spoken of by Brother Wm. J. Andrews. I am in favor of insurance, and especially when so small a sum will assist the heirs of a member to so large an amount, as mentioned by Mr. Andrews. I took a life policy at the age of 27 years; it has cost me $104.05; I am 34 years of age; dividends make it a little less than $80 now. I consider that I have so much actually laid up in case of my death, which will certainly occur; and the company is good. We can have one as good for less money.

WM. P. EVERITT.

Davis, Mich., Jan. 9, 1877.

For the American Bee Journal.

Pres. Bacon's Address

TO THE N. E. B. K. ASSOCIATION AT SYRACUSE, N. Y., FEB. 7, 1877.

Fellow bee-keepers:—I came to-day with no other object in view than to fill the position you assigned me (so far as I am able), and to extend the right hand of fellowship to those who are endeavoring to make this Association a success. This is our eighth convention, and I believe I have been present at every meeting, save two, since the organization, and in every case I went away feeling I had made poor returns for the benefits I had received. It was a surprise to me to have the honor of being your president, when there are so many connected with this Association more worthy and better qualified to preside over your deliberations. I am interested in these gatherings, they have been profitable to me, and it is always a pleasure to me to meet with this Association.

Another season of care and labor has passed away since last we met, and I trust not without its lessons of knowledge and profit to us. I think we have great reason to be thankful to the great Giver of all things for his kind care over us during the past year. So far as I know, no calamity has come to any of us, and none of our number have been cut down by death. Now, I trust, we have come together to compare our past experience and to aid each other in making bee-culture more successful in the future. To this end, I trust we shall avoid, so far as possible, saying anything that will mar the harmony of our deliberations. I judge from our past gatherings we shall have a harmonious meeting.

The honey bee has been admired for its works in all ages, and me thinks when Adam named this insect he judged it to be one of the fine works of God, and a wonder and blessing to man. Many a pen has been employed in portraying its peculiarities, and yet the theme is not exhausted. Its natural habitation is found in the rocks, the forest trees and even in the lion's carcass. It thrives in artificial dwellings, and thus it becomes more subservient to the will of man. Unlike other insects which work to destroy and leave desolation in their track, the honey bee is a source of revenue. It not only fructifies the flowers of the field and causes them to yield their fruit, but its production is the finest food for man. This sweet nectar is not only found on the poor man's table in the lonely cottage, but on the king's table in the palace.

Perhaps the strength of this interest can best be given in figures. In 1850 the amount of honey and wax reported in the census returns was 14,153,790 lbs.; in 1860, 23,366,457 lbs. of honey and 1,322,787 lbs. of wax. New York stood at the head of this list, with 2,360,751 lbs., and 9 other States are credited with more than one million pounds each, in the following order: North Carolina, 2,055,969; Kentucky, 1,768,692; Missouri, 1,585,983; Tennessee, 1,519,390; Ohio, 1,459,601; Virginia, 1,421,591; Pennsylvania, 1,402,128; Illinois, 1,346,803; Indiana, 1,224,498. In 1868 circulars were sent to known apiarians in nearly every State, and returns were received from 489 counties, in 32 States, and the lowest estimate that could be made by those returns, gave two millions of stocks. Estimating the total number of hives at two millions and the surplus honey at only 15 lbs. per hive—which is but two-thirds of the average report—the value of honey at that time, annually produced, at 25 cts. per ℔, would be $7,500,000, and the estimated value of honey in 1870 was $15,000,000. Since the above reports great destruction came to bees, and we think we are safe in saying up to last year their numbers have greatly fallen off, yet by the improvements made in bee-culture, the yield of honey has been larger than ever before, and still there is room for great improvements.

Were a rational system of bee-keeping in general use, this branch of industry would take rank with other branches of agriculture which are considered indispensable. Patent bee palaces, moth traps, self-actors, and many other so-called bee hives, should altogether be discarded as being of no benefit to bee-culture. Perhaps there are some present who are ready to ask if I would discard all patent hives? I answer no; not any sooner than patent plows, mowing machines or sewing machines. I believe if a plow can be made better, so can a hive, and the man that will improve them let him have his reward. The first plow was not what the plow of to-day is, and among them it is very easy to find good, better, best; and so it is with thousands of hives that are now patented. There is no good reason to discard a good plow because there are many poor ones, nor a good hive because there may be 49 out of 50 that are worthless. We should hold fast to that which is good and throw away the bad. Improvements come by degrees, and the man that adds one degree to this great storehouse of knowledge is a benefactor to his race.

The knowledge and practice of a good system of bee-keeping is very essential to success. To know how to raise apiarian products in a neat, attractive matter is also of prime importance. But there is something beyond all this which not unfrequently depresses and tends to paralize all our best endeavors in apicultural management. I refer to a loose and unskilled manner of marketing bee products.

Our constitution provides for one annual meeting in convention, when it is hoped all those who are interested in bee-culture within the bounds of this association will be represented, and take such action as shall be desirable for the better promotion of the bee-keepers' interest, and when in convention is it not eminently right and proper to mature some plan for associated action that will secure a fair price for our product? We have seen what wonderful results have been accomplished by associated action and by a combination of interests. The greatest enterprises of to-day, which are so astounding in their magnitude are the result of associated efforts, and these are tending to revolutionize the business operations of the world. We have seen what wonderful results have been accomplished by the associated system of dairying. We presume there are men living to-day who remember the time when American dairying was confined mostly to one county of this State, and but a few thousand pounds was the result of their annual labors. Cheese was slow of sale and dairymen talked then as some bee men at the present time do, that any addition to their production would cause its ruin; and when the business began to spread over adjoining counties fear came over many that were engaged in that branch of industry. They felt that their products would become worthless and their occupation would be gone. But time proved their fears groundless; as the dairy products augmented the consumption increased, and this branch of industry has continued to grow until millions of pounds have taken the place of thousands. Associated system has had much to do with this result.

What unity of action has done for dairying and other branches of industry, it may also do for apiculture. It is beginning to be understood that association and unity of action are the great main springs of power and progress in the world. The bee-keepers of this country are not fully awake to this principle in marketing their products. They have proceeded upon the plan of individual action, and often through inexperienced salesmen the market becomes impared and a loss to bee men is the result. I am glad to hear the sound of reform in this direction coming over the plains from California, and may an echo return sounding the glad news to our brother bee-keepers in California, that the East is also waking up to this subject.

I take the following extract from a committee report on selling honey. It says:—"We are advised by San Francisco dealers that producers are very much to blame in our present demoralized market in this city, by ordering forced sales while it is out of season for its sale, and also by sending to parties who, by inexperience are not informed as to this fact, and have consequently sacrificed their consignment."

Our local home market has been affected in a similar way to that of San Francisco, and all of these will act and react so that our eastern markets will be affected in like manner, according to the well-known laws of trade. This report tells us that the California honey market has become demoralized by inexperienced salesmen, etc., and fears are entertained that the eastern markets may become so, too. Is not this the case, to a certain extent, already? We earnestly hope that the bee-keepers of this country will wake up to this matter and prevent, if possible, further injury.

I venture here to present another subject which I deem injurious to our interest as bee-keepers, and that is the wholesale publication of reports of large yields of honey from single stocks or apiaries, without stating the condition of the bees, and how they were managed. It is not in many cases with these large reports, as with the case of a mammoth ox, made by a freak of nature aided by the care and skill of man regardless of expense? And do not such instances occur only once in an age? In other cases, and more often than in the former, are not such reports made by operating against nature, that is, by combining a number of swarms and in that way making them mammoth in size, and are not these large yields of honey the result? All this is well enough if the facts go with the report. But is it not more often the case that these mammoth reports are only on paper for noteriety and to have it go out that they are in advance of their neighbor bee-keepers. Such reports are to be deplored, and every honest bee-keeper should rebuke them. If this matter ended with the publications, the effect would not be so injurious. But we regret that this is not the case. We think in not less than three ways are bee-keepers injured by these reports:

1st. Many people who read these reports, believe them to be untrue, or in other words, "fish stories," and thereby the veracity of bee men comes to be questioned, and I ask what is a man in any business or calling without character? Is it not generally the case when a part of any profession is assailed for lack of honesty that it casts a shadow over the whole fraternity?

2d. It induces some people to start in bee-keeping with the expectation of large yields of honey, which will soon give them wealth, but when it is too late they wake up to find they were deceived, and then curse the bee fraternity for their failure and loss.

3d. Honey buyers keep their eyes upon all reports that have to do with the amount of honey produced in the country, and from these reports they fix the price to be paid, and when you go to dispose of this article, said reports are showed you, and if you are equal to the task of meeting them, you may carry your case to success. If not, you will suffer loss; the result is an injured market.

I would like to say more on this subject, but I have already taken too much of your time. I will only add, the old maxim, "honesty is the best policy." It is just as true to-day as ever, and is as applicable to bee-keepers as to any other class of men. Having an honorable employment let us ever prove ourselves an honor thereunto.

The Purity of the Italian Bee.

READ BEFORE THE NORTH EASTERN B. K. ASSOCIATION, FEB. 8, 1877.

Have we a standard by which the purity of the Italian bee can be gauged? Our old teachers in apiculture, such as Langstroth, Quinby, Dzierzon, Berlepsch and many other veterans, taught that there were marks by which the pure type of this bee could be known from the impure. These marks were confined to the abdomen, and consisted of three bands or rings varying in color, in bees of different progeny, from a dark leather to a bright yellow orange. The first band is near the thorax, and quite narrow; the second or middle band is the widest, while the third is narrow, and sometimes indistinct, except when the abdomen is distended with honey, when it can be plainly seen. If the bee is held by the thorax with the thumb and forefinger, it will, in its efforts to get free, distend the abdomen and show this third band. These bands can also be plainly seen when the bee is placed before a window. These instructors also taught that the entire worker progeny of the queen must show these three bands in a greater or less degree of conspicuity. If such was not the case, then the queen herself was either impure or impurely mated.

But since these solons in bee-investigation have ceased to let their light shine, a new set of lights, of far less magnitude, have ignored the above standard of purity, and now teach us that these rings can not be depended on as a criterion; that when some of the worker progeny of the queen are black bees, it does not at all invalidate the purity of the queen—she may be a pure Italian and purely mated with a pure Italian drone for all that. Now this, when placed by the side of our "standard," seems rather paradoxical. According to one phase of the question it is true, and to another it is false. Upon the assumption that all the bees in Italy are of one type, one class, one variety, it is true; but if we come down to facts, that were even cognizant to all the old Latin writers upon the bee, such as Virgil, that the bees in Italy are not all of the same variety, then the theory of purity so advanced by our modern bee-lights is false.

HISTORY OF THE MARKS.

All impartial writers and travelers tell us that there are two kinds of bees in Italy; that the bees in the northern portion of that country have the markings much more distinct than those in the southern part. Spinola, who wrote a treatise on bees in 1805, found two kinds of bees in Piedmont, though the common bee was less frequent there than the pure Italian, the peculariti es of which he describes, and terms it the Ligurian, a name by which it is now known in Europe. Varro and Columella also speak of two varieties. Kleine, a German apiculturist and writer of distinction, when speaking of the Ligurian bee, says: "At this day both varieties are met with in various parts of Italy. Mr. Dens, of Dusseldorf, found the orange-colored bees at Genoa and the black in Nizza." Capt. Baldenstein, when a soldier in the Napoleonic war, found the Ligurian, or pure type of the Italian bee, in the Lombardo-Venetian province, and near Lake Como, which he described in the *Bienenzeitung* in 1848. But even in these provinces the bees are mixed.

In October, 1875, I received an invoice of queens from Sig. Sartori, of Milano, Italy, and among the lot was a very fine dark leather-colored queen that produced progeny badly mixed. At least one-tenth of her worker progeny were as black as any natives to the "manor born." They had no signs of the bands that characterize the pure type. Now there was no mistaking; for, as she was a fine looking queen, I had great anxiety to know how she was conducting herself, and so examined the hive every few days (no interim longer than five days) to report progress. There was no superseding—no getting round the difficulty upon any such pretext. I wrote my correspondent to send me no more such queens. Now this queen was undoubtedly a pure Italian if the fact of her coming from Italy could make her such; but according to our standard of purity she was nothing but a mongrel hybrid. Had I purchased her for an imported queen from any dealer outside of Italy, I should have concluded he had imposed a queen upon me that had never seen balmy Italy. I never charged this Italian seller with dishonesty, but only blamed him for his carelessness. The most of Italian queen breeders do not rear all their queens, but purchase them from the country people; and as bee-keeping among the Italian peasantry is conducted in the most careless and slovenly manner, very little attention is paid to selection.

PURITY ESSENTIAL.

The Italian bee is not a distinct species as many suppose, but only a variety. The probable origin of it I will not discuss. Since Capt. Baldenstein first called attention to the pure type of this bee, it has undoubtedly been the means of shedding more light upon the mysterious wonders of bee life than all other agencies heretofore applied. Of its superior qualities over the ordinary bee I will not speak, for they are already well known. But in order to reap the full benefit of this variety of the honey bee, it is necessary to keep it up to the full standard of purity. Then it is an easy matter to control the crosses with the blacks, if such mixtures are more desirable for honey gatherers. Why does the stock breeder desire his pure breeds? He knows that if grades are desirable, they cannot successfully be made unless he starts with pure blood. The same principles apply to the honey bee, although the cases are not exactly parallel. If hybrid bees are desirable, then why not make the crosses ourselves. These observations and suggestions are offered for the consideration of bee-keepers who desire to see the interests of apiculture promoted; for just in proportion as we develop this industry do we add to the wealth of our coutry. J. H. P. BROWN.

California B. K. Association.

The San Diego Bee-Keepers' Association organized on Thursday, Feb. 1. After the reading of the reports, Mr. J. S. Harbison expressed his views at length, and in a very interesting manner. The points that were discussed were: The size and weight of packing cases; the proper tare to be allowed, and the kind of lumber to be used; the distribution of bees so as not to overcrowd the ranges; the number of grades to be used for making honey for shipment; and the necessity for properly instructing bee-keepers on these points. A motion was carried authorizing the directors to prepare a circular, giving information on important points; have copies printed and distributed to members, requesting them to post the same in their bee-houses and give attention to them.

Board of directors for the present year:—E. W. Morse, R. G. Balcom, J. G. Frazier, F. Ritzke, E. J. Rhodes, C. J. Fox, A. P. Herrick, L. Saunder, R. Rea.

The directors organized by electing for president, Chas. J. Fox; for vice-president, E. W. Morse, and for sec'y and treas., R. G. Balcom.

The president, E. W. Morse, in his report stated that he had issued and signed 2,860 grade certificates. He had corresponded extensively with a view to extend their market for honey and beeswax. Comb-honey had been successfully shipped to Scotland. If comb honey could be as safely shipped as extracted, European markets would take all of our surplus of both kinds. He then added:

In correspondence with parties in Mexico and Central America, I was told that those countries produced enough honey for their own consumption, but imported considerable quantities of beeswax, and this singular fact was shown: that the merchants residing on the Pacific coast of those countries purchased beeswax in St. Louis, shipped it by rail to San Francisco and then by steamer to destination, which shows the circuitous routes the currents of trade will sometimes take. My correspondents informed me that they paid in St. Louis 50c. per ℔. And yet the same identical pound of wax could have been purchased in San Diego for less than 30c., saving the cost of a 3000 mile trip to St. Louis and back. These things, in time, will regulate themselves, and the advantage of an organization is, that we can greatly hasten the time to our own advantage. I believe our organization is proving itself to be a success; it has been but 7 months in existence, and the reports of the secretary and of Mr. Fox, our most efficient agent and vice-president, will show results which could not possibly have been obtained by the members in their individual capacity.

Our great need now is cheaper transportation. Could the exhorbitant charges we now pay for freight to the East be reduced to a fair rate, our bee-keepers would enter upon a season of great prosperity. We hope, by an organized effort, some reduction may be made. As our organization becomes older and better known it will have more influence abroad and become more valuable to ourselves. Honey, with our "grade certificates" upon it, will be in greater demand and bring better prices, and though now in its infancy it is only a small institution, yet I look forward to its becoming of great importance, not only to its own members but to the business interests of San Diego County.

The directors reported that they obtained a good brick building as a warehouse, employed an experienced man as grader, made contracts for drayage, etc., had prepared printed certificates of grades to be affixed to cases of honey, and made arrangements with the steamship company for careful transportation, and other minor details. Under these arrangements they have during the past six months received, stored, and graded as follows:

Cases of comb honey	1433½
Cases extracted	13
Barrels extracted	21

They have shipped as follows:

Cases of comb honey	1058½
Cases extracted.	13
Barrels extracted	21
Total	1092½
Leaving in warehouse at date of Feb. 1.	375

To St. Louis and Cincinnati, 1 car load each; to St. Paul and Boston, ½ car load each. All had been received and acknowledged, but no returns had yet been made.

C. J. Fox, their special agent, reported as follows:

The honey business of Southern California, though of very recent origin, has grown to large proportions. San Diego county alone produced in 1877 about 1,250,000 lbs., four-fifths of which was shipped in the comb and one-fifth extracted. Our facilities for raising honey and increasing our stock of bees are the best in the world. Throughout our honey range, which extends back from the coast to the high mountains, a distance varying from 40 to 100 miles, ice and snow are unknown, while frost occurs so seldom as to be very little regarded. During 8 or 9 months of the year no rain falls, no hail or thunder storms interfere with the breeding or working of the bees, and there are not more than 2 or 3 months when they have any difficulty in providing for themselves. The season for the production of surplus honey lasts from 4 to 6 months, during which there is an almost constant succession of wild honey-producing plants or shrubs, and there is probably no other place in the world where honey is gathered so rapidly as it is here while white sage is in bloom. We do not need to plant clover or buckwheat or mignonnette, for white sage and other indigenous plants produce honey as white and of as fine flavor; we do not need to build houses and warm them or put in cellars to protect them from the winter cold, for while our Eastern friends are contriving how to save their colonies through the long period of ice and snow, our bees are flying abroad providing for themselves. Under these circumstances it would seem that the business here should be more profitable and make a better return for capital and labor than anywhere else. But there are some drawbacks as there are in every business, and it is for the purpose of meeting and overcoming the difficulties of our position that our Association was formed and that I am now addressing you. The problem of how to raise honey in large quantities has been solved, mainly by the indomitable energy, preseverance and skill of our townsman, Mr. Harbison, to whom we are indebted for the first commencement and most of the methods at present in use among us.

The first question in regard to any article of commerce is how to produce it, the second is how to transport it, and the third is how to dispose of it profitably. As I said, the first is practically solved among us. Improvements can yet be made, no doubt; economy of labor and increased production may be attained, but we can already produce an amount much larger on the average than any where else we know of. The second question, transportation, has been only imperfectly solved, and much yet remains to be done. Several difficulties stand in our way. One is careless handling and too many reshipments; another, high rates of freight and irresponsibility of railroads and shipping agents. During a trip of 3 months East the past season, and while acting as agent of our Association, I made efforts to meet some of these difficulties. I found the owners of the steamship line from San Diego to San Francisco willing to do everything in their power. They issued orders to their employees to handle comb-honey with care, to have it all carried by hand on and off the steamers, and to see that it was not thrown down or roughly treated. Since these orders were issued we have had but little to complain of in this respect. When a consignment of honey reaches San Francisco it is very important that it should be received and cared for by some one who thoroughly understands the importance of care in handling. To secure this I made an arrangement with a very thorough and careful business man, Mr. R. Dixon, who, as soon as he received advices of shipment and destination of a consignment, made arrangements with the C. P. R. R. for a car; as soon as the steamer was discharged, had the honey carefully conveyed on spring wagons and loaded in the car under his own supervision; and so well has he done this that all he has shipped has reached its destination in as good condition as was received in San Francisco. A great deal of difficulty is encountered by the way the C. P. R. R. do business. Though they understand thoroughly the very great damage certain to occur to a car load of honey by its being transferred from one car to another *en route*, they will not guarantee its through shipment, as they do with fruit. They will not afford any warehouse room, even for a night; the honey must be taken from the wharf the day it is unloaded, and must be loaded into a car standing on a side track as it is hauled. If they do not happen to have a car ready and belonging to the city where the honey is destined to go, the shipper must store it somewhere, and rehaul it, or run the risk of its being ruined by transferring from one car to another. The rates of freight are exorbitantly high, a car load of wool, for instance, being transported to N. Y. for about one-half the charge on a car load of honey. These difficulties should be met in some way, either by a more favorable arrangement with the R. R. Co., or by procuring warehouse facilities near the railroad or steamship company's warf,

Possibly, if our Association does a larger business in forwarding honey, we may obtain more consideration. The style of packing honey in the cars, invented by Mr. Harbison and used by our agent, is an excellent and safe one. We have a further difficulty to contend with in the unloading and transporting of our honey at its destination, and to guard against injury there, I took pains to fully impress upon all commission men, and others to whom we might ship, the importance of very careful handling. In fact the liability of comb honey to injury in transporting it any distance is one of our greatest difficulties, and is a strong argument in regard to what I will refer to further on, *i.e.* the advisability of fostering a market for extracted honey. These are some of the difficulties attending the shipping of our product, and most of them can be lessened by co-operation among ourselves, for by concentration of business we obtain respect and consideration.

The next and most important consideration is to sell our honey at a good price. This was not difficult when the amount produced was small, but now that it is so large and rapidly increasing it is very important to extend our markets, to put it for sale where it is not known, and to procure, as customers, people who can appreciate a good and pure article.

Formerly, every farmer through the country made a few cheeses. These were traded to country dealers, and by them to wholesale dealers, but there was no system or uniformity. Now, great factortes make cheese in immense quantities, of a uniform size and quality, and supply foreign and home markets. A few years ago farmers kept a few hives of bees. Honey in all qualities and conditions was sold or traded to country dealers, and collected by wholesale dealers, without order or system. It is only very lately that men have engaged exclusively in producing honey in large quantities, probably no other man in the world having raised in one year as much as Mr. Harbison, of our county, his crop the past year approximating 100 tons. It now becomes necessary to do, as was done in the cheese trade—extend our markets.

Another evil has attended our sales the past year. Through want of co-operation, our producers have shipped in small quantities to persons who did not understand the trade. They have handled it carelessly, competed unnecessarily with one another, crowded it on an unwilling market, and in various ways lowered the price. A far better way is to employ a good, reliable agent to sell on commission in each large city, with the understanding that he shall supply the market in that place, and so avoid injurious competition. I made it my business the past fall to find such men, and have made arrangements with one in each of the large cities, for whose ability and integrity I have ample guarantees.

The system adopted by our Association of careful repacking, grading, and marking with reliable certificates, meets with favor and appreciation among dealers, who will be able, as soon as our system is understood, to sell by sample, saving the time and injury to the honey by opening every case for inspection.

It is unquestionable that good extracted honey is the purest and best form in which it can be eaten, and when the public can become convinced that extracted honey shipped from here is a pure article, it will be preferred to comb honey. The honey we ship is perfectly pure, it can be raised here at a less price than it could be manufactured for. On each package of comb honey the tare is 14 lbs., as at present calculated, or, at 3c. per ℔ freight, 42c. per box of about 56 lbs. net of honey, or over 4-5 of a cent per ℔ dead loss. On a cask holding 20 gall. the tare is 20 lbs., at 3c. per ℔ is 50c., or about 1-5c. per ℔ on 280 lbs. net of honey; so that on each net ton of comb honey shipped we pay $12 more freight than on a ton of extracted honey. It is the testimony of those who have tried it, that fully double the amount of honey can be made from the same number of bees, by the use of the extractor. This, combined with the saving in freight, shipping boxes, breakage of comb, etc., will enable us to put extracted honey on the market at a much less price than comb honey, and realize for ourselves as good a return for our labor. It is the experience of the world that cheapening the price of any article increases the demand, and if we can get our extracted honey before the public all over the world, on its merits as a good and pure article, at a price much lower than comb honey has hitherto sold, we shall have no difficulty in disposing of all we can raise.

I would urge upon all interested in apiarian pursuits, the necessity of co-operation; intelligent efforts at improvement in producing and shipping our product economically; honest and fair dealing; and that hearty and cordial mutual assistance so much needed at the commencement of a new enterprise. Rely upon it that narrow-minded jealousy and unnecessary competition will injure us each and all, while cordial co-operation will relieve our present depressed condition and make the production of honey one of the most profitable occupations in which we can engage, while populating and rendering useful large areas of country otherwise barren and unsettled.

Chas. J. Fox.

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☞ Subscribers will please notice the date upon their subscription labels and see that they are "up with the times."

Foreign Notes.

WHAT OUR FRIENDS ACROSS THE WATER SAY CONCERNING THE DIFFERENT RACES OF BEES.

G. Dathe, Eystrup, Hanover, says in his circular and price-list for 1877: "I do not raise Cyprian, Egyptian, or Krainer bees any more;" but he does not tell why. Mr. Dathe, who is one of the most prominent bee-keepers of Germany and author of valuable works on bee-culture, possesses three large apiaries. His home apiary, consisting, in summer, of about 400 colonies and 200 queen hives, is devoted largely to queen-rearing, and his aim is to raise only "Italian queens of the purest full-blood, which produce the most beautiful bees and queens." It is well to see what men of his experience say of the various races of bees.

At the 21st Wanderversammlung of the German and Austrian bee-culturists held at Breslau, last Sept., W. Guenther, of Gipersleben, Hanover, asked: "What has been the experience during the past years in reference to the various imported races of bees?" Quite a discussion ensued, which *Der Sehlesiche Imker*, published at Troppau, Silesia, sums up as follows: "From the various experiments made during the past years it appears that, as regards diligence and prolificness, the Egyptian bee ranks after the German and Italian; that the Krainer race, at the expense of honey, produces many bees; the Cyprians are diligent, but quite inclined to sting; between the German and heath bees there is no particular difference; in poor seasons for honey the Italians gather more than the German bees. The Herzegovinian bee is praised. Bees obtained by judicious crossing have the preference over the pure races."

In an article entitled, "Die Bienenzucht in Boehmen,"—Bee-Culture in Bohemia—which Rudolf Mayerhoeffer, of Prague—the editor of Bohemia's bee journal, *Der Bienenvater*—contributes to an Alsatian bee journal, is the following: "The Italian bee was praised likewise, as in Germany, as *non plus ultra*, and it was believed that the golden time of bee-culture had come upon us. Now all is still; attention is turned to the Krainer bees, and, more recently, to the Cyprians."

Here is Dzierzon—the man whom the Germans honor with the title "Gross-meister" (great master)—after 25 years' experience with Italian bees, saying: "In Feb. of this year it will be a quarter of a century since the first Italian bees (from Mira, near Venice) arrived safely in Carlsmarkt. The importation of the Italian bee to Germany can rightfully be noted as a real event in the history of bee-culture; not less worthy of note, however, is the fact that during a quarter of a century it has been possible to preserve it pure and unmixed. Thus has it been proved that this as beautiful as gentle, diligent, and prolific bee bears our German climate very well, and that its preservation in purity is, with some care, quite possible, even though made in a measure difficult, on account of the mating of the young queens in the air. * * * * The importation of the Italian bee increased directly the profits of bee-culture, because this bee not only excels the common bee as regards beauty and gentleness, but also in its greater watchfulness and prolificness, and particularly in its greater diligence—superior qualities which the Roman poet Virgil praises as belonging to the golden-colored bees, and have been fully preserved to this time."

During the whole quarter of a century Dr. Dzierzon has bred from the queens first imported and their descendants, having obtained no more Italians. At the various large conventions and exhibitions held in Central Europe, his bees have received the highest prizes as pure and beautiful Italians.

SALICYLIC ACID.

The *Bienenvater, Prague, Bohemia*, says:

This acid is not only a remedy for foul brood, but it also renders us an important service in the preservation of honey. As is well known, newly-extracted honey ferments easily in consequence of its thorough mixture with the air, which contains the fermenting principle; and in order to cause sweet-must to ferment, it is regularly beaten up. Salicylic acid placed in wine-must prevents fermentation for months, as it completely paralyzes the strength of the barm. FRANK BENTON.

For the American Bee Journal.

Honey a Luxury.

At the North Eastern B. K. Meeting held at Syracuse, on the 7th to 9th of Feb., 1877, Mr. J. H. Nellis said:

"We must produce honey cheap enough to compete with other sweets, to make it a commodity of general demand and ready sale. Can bee-keepers do this? If so, there is no limit to the business of honey producing. If not, the business is already overdone."

A very just remark. Honey will ever be eaten as a luxury or kind of "side issue," even at one cent per ℔. I have sold rich, choice extracted honey at 11½c. per ℔, by the gallon, for two years past, and urged it upon the market in every way possible, yet ten times as much cane syrup has been sold in the mean time. In the last 10 days more pounds of maple sugar have been sold at 16c. than of honey at 11½c. during the past year. Our city uses twice as much comb honey as extracted. They pay 22c. to 25c., retail, for comb honey. Honey and heat are antagonistic to each other, and this one fact casts both comb and extracted honey into the narrow sphere of sauce. Sour sauces are much preferred to sweet sauce. Very many prefer all other kinds of sweet sauce to honey. Many people will not eat sauce at their meals at all. Those who imagine they see a broad "rock bottom" only a little way down, just ready to catch any amount of honey everybody can produce, will ere long get the mote out of their eye, and find themselves looking into a chasm without bottom.

What bee-keeper wrote in the *Bee-Keepers' Magazine* that he remembered when brown sugar was worth 25c. per ℔, and honey (strained) 12½c. per gallon? This is the other extreme, but not impossible, as one will not fill the place of the other. No man can see such great profits in the production as professional supply dealers, who are charitable enough to sell a hive for 75c., a queen for 90c., and a colony of bees containing the aforesaid, for $6.50; so that you can get the "worm" while he goes without anything (except the $6.50).

In my article on page 95, March, 1877, "$12 worth of honey in glass jars," should read, $1,200 worth. Also read "Watt's pills," *water pills*.

I shall be on hand at the next National convention, as I have a new patent as well as a potent hive. It is one of those side-door and glass fellows, only that the glass is *blue*. Bees kept in this hive, last season, grew as large as humble bees, and could ravish anything from a red clover head to a gallon jug. All the obstacles yet met with is that they can sting through an inch board, such is their size and vitality. I wish, Mr. Editor, you could get the Chicago honey quotations under blue glass.

JAMES HEDDON.

Dowagiac, Mich., Mar. 5, 1877.

For the American Bee Journal.

Blasted Hopes.

We remember of no occasion that prompted deeper mourning over blasted hopes than we now have in this county. Fully three-fourths of the bees wintering out-of-doors are dead already, and the weather is very unfavorable for the balance. The snow is about 14 in. deep; the thermometer ranging from 6 deg. below zero to 30 deg. above, during last week.

Of 68 in the cellar, I lost one up to Feb. 15. Have not examined since, but am anxiously waiting for warm weather to give them a fly and feed up weak colonies.

We had no surplus honey, except in the basswood season. We had an abundance of white clover and fall flowers, but the cold, wet weather prevented the secretion of honey. The fall found us short in stores, causing a great deal of feeding and uniting of weak colonies. An unfavorable fall was followed by a severe and rigorous winter. On Dec. 8th the thermometer was 12 below zero, and the cold continued till the last of Jan.; when, greatly to the relief of the little pets, they had a nice flight. Feb. was favorable; March, cold and blustering.

As to the cause of the great fatality, there is, as usual, a diversity of opinions; but I believe all agree that poor honey and cold weather will cause dysentery. To an abundant apple crop I attribute one of the main causes. During the cold, wet weather, when flowers were secreting but little honey, the bees were swarming around the cider presses and on the bruised and rotten apples in orchards. The honey gathered after Aug. was never capped. Before cold weather set in they were busily engaged in uncapping all that had been nicely sealed. This uncapping I have been unable to account for. Can you explain? The fatality is general.

A near neighbor who was opposed to the use of the extractor and the beautiful Italian bee, runs his on the old style of "Let alone policy." He extracted no honey, and then, to his utter disgust, his 16 stocks of untampered with, pure blacks all succumbed to dysentery. Now, Mr. Editor, had these 16 colonies of blacks—treated on the "Let alone policy"—all lived through the winter, there would have been no further use of the extractor and rearing of Italian bees.

W. F. WILLIAMS.

Liberty Center, O., March 19, 1877.

American Bee Journal.

TERMS OF SUBSCRIPTION.

Single subscriber, one year,	$2.00
Two subscribers, sent at the same time	3.50
Three " " " "	5.00
Six " " " " "	9.00

All higher clubs at the same rate.

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1 month, per line,	**20** cents.
2 " " " each insertion,	**15** "
3 " " " " "	**12** "
6 " " " " "	**10** "

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Special Notices, and pages next to reading matter, one-third more than the above rates. Last page of cover, double rates.

No advertisement received for less than $1.

Cash in advance for all transient advertisements. Bills of regular advertisers payable quarterly. We adhere strictly to our printed rates.

Address all communications and remittances to THOMAS G. NEWMAN,
184 Clark St., CHICAGO, Ill.

Write names and addresses plain—giving County and State.

Additions can be made to clubs at any time, at the same club rate.

When changing post-office address, mention the *old* address as well as the new one.

Specimen copies, canvassing outfit, Posters, and Illustrated Price List sent free upon application.

We send the JOURNAL until an order for discontinuance is received at this office, and arrearages are all paid.

We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Remittances to be sent at our risk must be by Post-office Order, Registered Letter, Draft or Express (charges prepaid). Make Post-office Orders and Drafts payable to Thomas G. Newman.

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and is a very valuable work.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be tested.

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MORE PREMIUMS.—Friend Murphy sends the following: "I offer a No. 1 Extractor (the wood part of black walnut) for the one sending the largest number of subscribers to THE AMERICAN BEE JOURNAL between March 1st and Dec. 31, 1877. The publisher to be the judge."

Dr. J. P. H. Brown offers as a premium to the person sending the greatest number of subscribers to THE AMERICAN BEE JOURNAL, between now and the first of July, a tested queen of imported mother. The queen to be sent upon presentation of certificate from the publisher, certifying to the number of subscribers sent.

◆

☞ We have now gotten up a beautifully Illustrated Catalogue of everything used in the apiary, with Prices Current, and much other information, which we will send FREE to all who desire them. As we wish to get one into the hands of every bee-keeper in the United States and Canada, we will supply them FREE in any quantity to those who will kindly distribute them.

CHOICE CATNIP SEED.

In packages of one ounce, price 50 cents, postpaid. For sale at THE AMERICAN BEE JOURNAL Office. Address

T. G. NEWMAN, 184 Clark St., Chicago, Ill.

AARON BENEDICT,

Importer and Breeder of

PURE ITALIAN BEES.

I would say to my former patrons and others, that I am devoting my entire time to rearing Italian Bees and Queens. I have been breeding Bees for the past 11 years, and claim that I can produce

PURE ITALIANS.

My Book, 128 pages, describing the habits and culture of the Honey Bee, sent, post paid, for 50 cents. I also breed the

AMERICAN WILD TURKEYS,

grade mixed with the large Bronze, for sale for breeding.

For further particulars address

AARON BENEDICT.

feb-tf Bennington, Morrow Co., Ohio.

HONEY BOXES.

SO CHEAP THAT IT WON'T PAY TO STEAL THEM !

Special Price List for 30 days.

2-lb boxes, 2 sides, 5x6 in. glass, cut to nail:

100 boxes	$ 1.50	3,000 boxes	$27
500 "	6.00	4,000 "	34
1,000 "	10.00	5,000 "	40
2,000 "	19.00	10.000 "	75

3-lb boxes, glass, 6x8 in., only 25c. per 100 more.

Delivered FREE at any depot in Chicago.

24 boxes, 5x6, or 16 do., 6x8, makes one set for the Langstroth hive, 14x18 in.; weight 3 lbs.

Sample box, by mail, 10c.; one each size, 15c.

Will make this box of any size and shape to fit any hive in use. Send INSIDE dimensions.

240 lights Glass, 5x6, $2.75; 150 do., 6x8, $3.

☞ Descriptive circular giving BEST method of using these boxes sent FREE. Don't forget to write for it. Address

NATIONAL BEE HIVE FACTORY,
St. Charles, Illinois.

1877. ITALIAN QUEENS. 1877.

I warrant every Queen to be as pure, handsome and prolific, to produce as beautiful and peaceable bees, and to be as good in every respect as tested queens sent out by any dealer in the country.

Mr. L. C. Root, of the late firm of Quinby & Root, stated at the bee-keepers' meeting at the Centennial, that "He had purchased 60 Queens of us, and all of them were very superior queens." M. G. Bundy, a prominent bee-keeper in N. Y. State, wrote us March 6th, as follows: "Your queens are the handsomest, and produce the most beautiful and peaceable workers of any I ever saw."

The present year makes the 15th that we have raised and sold Italian Bees. Queens, $1 each. Nucleus Hives, containing 4 frames and one of our best queens and a few drones, $3 each. A nucleus feeder and one of my smokers and a queen cage sent with each hive.

Send Money Orders on the Salem, Mass., P. O. All orders will be filled as promptly as possible. H. ALLEY,
Wenham, Essex Co., Mass.

Eight Yearly Vols. of A. B. J.

For Sale for $12.

Address JOSEPH DUFFELER,
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TULIP TREES, by Mail,

From 6 to 8 inches high, 75c. per doz. Address
THOMAS G. NEWMAN, Chicago, Ill.

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Bees and Queens for Sale.

I import direct from Cyprus Island and Italy, and my Queens can be depended upon for breeding. I guarantee safe arrival, and will ship in April and May. Imported Queen, $8; Imported Colonies, $15; Imported Nuclei, $10; Home-Bred Tested Queen, $3; Full Colonies, $12; Nuclei, $6. Address

HARDIN HAINES,
mar6m Box 93, Vermont, Fulton Co., Ill.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, MAY, 1877. NO. 5.

Editor's Table.

☞ Several articles prepared for this issue are crowded out for want of room.

☞ In California the recent rains have added much to the honey crop as well as to the spirits of the bee-keepers.

☞ Charles Kellar, of Lake County, Ind., reports having safely wintered his 22 colonies, and has had no spring dwindling. He wintered out of doors and packed in straw.

☞ We have a large stock of catnip seed and have concluded to sell during May at 30c. per ounce, post paid, though it cost more than that at wholesale, besides expressage.

☞ The price of Bingham's Smoker being reduced since our cover was printed, it is therein quoted at $2.00. We shall sell it, as well as everything else, at manufacturer's prices.

☞ D. P. Hartford has sent us specimens of his honey boxes, which are so constructed that they can be put together without a nail by the ends being "chamfered" and grooved. They are very ingeniously constructed.

☞ Friend Kretchmer has sent us one of his feeders, and also a fumigator. The latter is to hold in the mouth and blow smoke into the hive. The former is a tin box with a little cap filled with holes, through which will ooze the food for the bees to take.

☞ M. E. Loehr sends us a specimen of Alsike seed, procured of "Novice," and thinks it "sorrel." and asks our opinion of it. It is native Alsike. The best Alsike seed is imported; it costs more but is worth all it costs. We took it to Briggs & Brothers seed house, and asked their opinion. They also pronounced it Alsike, and not sorrel.

☞ The Rockland Fruit Farm Annual is on our table. It contains a colored plate and much useful information. It is sent free to any one addressing J. E. Remsburg, Atchinson, Kansas.

☞ F. W. Chapman writes us that the bees in his locality wintered "as of yore." He has lost but two, and reports the best success he ever had in wintering. He adds: "It pays to take care of what you have; one of my neighbors lost 78 out of 80; another 21 out of 25, and several all." They were kept in the old style and unprotected.

☞ E. C. Jordan, (Va.,) has sent us a "Swarm Catcher," and remarks:

> "I have used it since 1861, and could not be induced to give it up. It is used by putting it on a pole of suitable length, with sockets in the small end, which should have an iron ring to keep it from slipping out. It should be made of undressed boards."

We have added it to our museum, for the inspection of our visitors.

☞ The New Orleans *Picayune*, speaking of the impulse given to bee-keeping in Louisiana, says the use of the Extractor has enabled hundreds of barrels to be shipped from that State, North, yearly. The writer thinks honey enough could be made in Lousiana to sell for more in the markets of the world than the best sugar crop, and best cotton ever made in Louisiana sold for.

☞ S. Corneil, of Canada, has sent us a sample of a frame which has cast iron arms to keep them at regular distances at both top and bottom. He remarks:

> "These frames are suspended on metal rabbets; the arms in the bottom being driven in close to the frame, while those in the top are not driven home by about ⅜ in. It occurred to me that this was the very frame one of your correspondents in the Feb. number of the JOURNAL wanted. You see there is no chance to glue these frames fast. I am not the patentee, nor do I use them, nor have I any interest in them whatever."

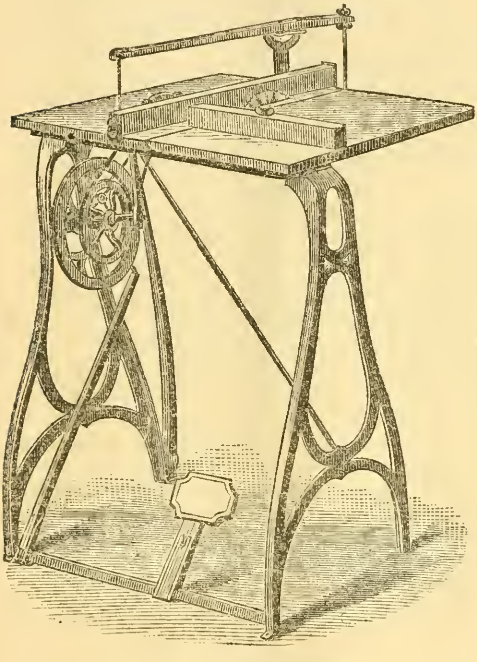
We thank friend Corneil for sending it; but we should hesitate to use such a frame. We think the "objections" outweigh the "advantages."

The Barnes Foot-Power Saw.

For the convenience of bee-keepers who visit this office (and they are not a few) we have induced Messrs. Barnes to send us one of their combined saws.

Those who call here will hereafter be able to "investigate" it to their hearts' content.

The following cut will give a good idea of the combined circular and scroll saw, as it stands in our office; the price of which is $40. This includes one rip and one cross-cut saw, 6 inches in diameter, and 12 assorted scroll-saw blades. Its weight is 160 lbs.



It is a beauty and works like a charm. Each machine is perfect, neither is subordinate to the other, though combined in one; doubling its value without detriment to its power or working qualities.

The six-inch diameter saws reach 2½ inches above the table. They can be used on the mandrels, set wabbling, to cut any desired width of groove.

The cut-off saw gauge is set by a thumb nut and radial slot to cut any desired angle, for frames, etc. The gauges can be removed instantly from the table and are always in perfect condition for their different purposes.

Emery wheels can be used readily on the mandrels whenever desired.

For making hives and boxes there can be nothing more convenient than Barnes' foot-power Saws. Any person who has one could not be induced to dispose of it. It will cut through one inch pine boards at the rate of 8 feet per minute, line measure, and will cut either thicker or thinner lumber.

The table is 28x28 inches, and stands 35 inches from the floor.

Steam power can be used on these machines at an extra cost of $10 for counter shaft and belt pulley.

From several letters from bee-keepers, etc., who have this saw, we glean the following:

San Buenaventura, Cal., Dec. 29, 1876.—"With my one-horse Barnes' Saw I am just shelling out the bee-hive stuff."
R. WILKIN.

Brumfield Station, Ky., April 9, 1877.—"I am well pleased with the way my Saw works. The cutter heads groove to perfection."
O. BRUMFIELD.

City Bluff, Mo., July 23, 1876.—"The Combined Foot-Power Scroll and Circular Saw came in good condition. We were not long in setting it up and giving it a trial. We consider it the simplest and best constructed machine ever put before the people. It works like a charm and we recommend it to any one wanting a saw."
SCOTT & BRAMBLETT.

Modesto, Cal., Jan. 6, 1877.—"My cases for storing surplus honey are admired by all. I cut them out with my Barnes Foot-Power Saw."
J. F. FLORY.

Winchester, Va., April 9, 1877.—"I think no one can be happier than I am, especially when ripping ⅞ in white pine with Barnes' saw.

"Two other bee men are only waiting to raise enough surplus funds to pay for one of Barnes' saws. They are each anxious to buy one. I would not sell mine for twice its cost. I do not want to be a day without one."
O. M. BROWN.

Wyandotte, Kansas, Feb. 26, 1877.—"I make all my hives for 75 stands of bees with one hand and the help of your Power Saw, including frames and section boxes, and feel perfectly able to do the work for 150 stands."
W. P. HOGARTY.

"This machine is one of the brightest illustrations of genuine Yankee ingenuity that it has ever been our fortune to meet, and the simplicity and fewness of its parts are really surprising. With the new and novel foot-power, the only wheel about the machine, except the saw, can be instantly set humming like a top, and one of the prettiest little saws can be attached to it in a little more than a second of time, yet the whole is so extremely simple that even a child can do nice, true work at once. At our first attempt we sawed one foot of ⅞ in. pine in six seconds."
A. I. ROOT.

We supply it at manufacturer's prices, and advise all who need such an article, to procure it.

Notes and Queries.

Owen Co., Ky., March 17, 1877.—"I am at a loss to know how to make surplus honey-boxes and section frames. I hope to get the desired information in the A. B. J. We are in 38 north latitude and are now having cold rains. March, so far, has been a cold month here. I have lost some weak stocks but most of the bees are in good condition. After a few days of fine weather the elm will be in full bloom." G. W. JENKINS.

[On page 122, may be found a description of sectional boxes, which will perhaps be of value to you. In Cook's Manual for the Apiary, page 44 and 45 you will find a full description of how to make frames and boxes.—ED.]

1. On measuring my Langstroth hives I find them only 14 in. wide and containing 10 frames, which instead of 1½ in. to the frame gives but 1 2-5, and as the bees often build a part of the comb straight and then mix it all up, would it not be better to put only 9 frames in each hive ?

2. I wish to prevent "in-and-in breeding." Can I successfully do so by sending for a dozen queens, and on their arrival take about 3 combs with adhering bees from each of three hives and place them in an empty hive and introduce a queen immediately, without keeping her confined in a cage ?

3. Would it be necessary to place the new hive in place of one of the aforesaid hives ?
H. B. ROLFE.

[Fourteen inches for 10 frames are sufficient for the bees. If some bee-keepers give more space, it is for their own facility; for the combs can be more easily extracted from the hive when they are wider apart. But bees will build the combs truer in the frames only 1⅜.

2. Yes ! By buying a dozen queens you can prevent "in-and-in breeding;" especially if you buy them from different breeders. But we would not recommend the plan of introducing that you describe, and were we to try it, we would not put the new hives in place of the old ones; for the old bees would be apt to kill the queens.—CH. DADANT.]

Juniata Co., Pa., April 20, 1877.—"Apiarists in this locality have suffered greatly from the severity of the winter. Nearly one-half the bees are dead and others greatly reduced. Many perished during the excessive cold in March. My loss has been very light. Wintered out-doors, having my bees protected from the north-west winds by a high board fence. I use mostly the Farmer's Hive, with double walls and an absorbing mat on top. I have 30 colonies, nearly all in very fine condition.

"A Question.—How can we best prevent extracted honey from souring in the warm weather ? I had trouble with mine last season, although carefully put up in Muth's honey jars.

"I find my interest in the JOURNAL constantly growing—could not do without it. I heartily recommend it to all bee-keepers."
J. E. KEARNS.

[Those who have experimented with remedies for "souring," will confer a favor to the bee-keeping fraternity by giving the results of their experiments in the AMERICAN BEE JOURNAL.—ED.]

Benton Harbor, Mich., April 14, 1877.—"I put 10 colonies of bees into the cellar on Dec. 1st; after snow came, and we had a few cold nights. On April 1st I took them out; one was weak and another dead. The 8 are in good order. I have fed them syrup made from A sugar; also about 2 lbs. of rye meal per day. Is there any danger in feeding too much meal ? One of my neighbors put 100 colonies into winter quarters in good order; some in the cellar, some in boxes packed with straw around the hive, and some of them were covered with stalks in his barn. All that he can count on now is 29 swarms; the rest have gone the way of all the earth. Can some of your correspondents tell us what was the matter. The combs were bright, with plenty of honey. He is an old bee-keeper and has always had good success before. He thinks that he let them stand until too late before he put them into winter quarters. Do you think that the cause of the loss ?"
O. E. MEAD.

[We cannot guess the cause of the loss without knowing the circumstances of this unlucky wintering. Your neighbor is probably right, especially if he put his bees in their winter quarters after a spell of very cold weather, and when their abdomen was already distended with fæces.—CH. DADANT.]

Crawford Co., Mo., March 19, 1877.—"I have never seen in bee publications what the effects of sugar maple water has on bees. My bees have plenty of honey, but they work strongly on sugar water. Please let us know, in the JOURNAL, whether it is good for them. Another question I would ask: Will bees do as well with frames hung crosswise to the flyhole as lengthwise ?"
JOB HARMAN, SR.

[Sugar maple water is very good for bees. They will increase in brood very fast with it.

Combs hanging crosswise with the front board of the hive are called cold combs. If hung lengthwise we call them warm combs. Americans prefer the cold combs, while the Germans and Italians, having side-opening hives, use warm combs. I am nearly sure that queens will lay more in cold than in warm combs, especially during the summer months.—CH. DADANT.]

Perry Co., Ill., April 9, 1877.—"I have 10 colonies, some in box hives. I wish to transfer them and would like to know how to do it. Also please tell me how to make bees raise queens when their queen is lost."

Joseph Brown.

[Transferring can be done at any time but it is best when there is but little honey in the hives, early in the spring. On a warm day, after the bees are at work, blow some smoke in the entrance and take the hive a short distance away and turn it bottom upwards. Place the new hive over it and wind a sheet about the hives where they come together, so that the bees cannot get out. Put a box on the old stand for the returning bees to cluster in. Rap on the lower hive 15 or 20 minutes, and the bees will fill themselves with honey and go up into the new hive with the queen. Take the new hive down; knock the box hive apart, cut out the worker comb and fit to the frames (be careful not to damage the comb,and also to save all the brood); fasten the combs into the frame by tieing it, or putting a few wires accross it. Set the frames in the new hive and proceed with the rest, till all the worker comb is in. Raise the front of the hive and get the cluster in the box which was put on the old stand; shake them down in front of the hive. When the bees are all in, set the hive on the old stand. In about 3 days the bees will have fastened the combs; then the strings and wires may be removed; the colony being then in good order.

If a colony is queenless the bees will start queen cells, if they have anything to do it with. To give them a good queen cell from another colony is the easiest and quickest way of providing them a queen.—Ed.]

Decatur Co., Tenn., April 1, 1877.—"I commenced a few years ago with 4 box-hives; I now have 40 colonies in the American and Thomas hives. I have tried to learn something of the bee as my stock increased. I have Root's honey extractor; it is exactly what it claims to be. My bees pay me over 200 per cent. We had too much rain last season, for much surplus honey. I never expect to be without bees and The American Bee Journal. It should be in the hands of every apiarist. I am wintering on the summer stand, and shall, I think, not loose one-tenth of my bees. I expect to move some of my bees to Illinois soon. I want a little more information on nucleus swarming. I expect to Italianize my whole stock next summer.—What will give me the desired information?"

O. P. Storm.

[Get "Cook's Manual of the Apiary," and study it on these subjects, and with your determination you must succeed.—Ed.]

"Editor A. B. J.—Having received one of the smokers, sent as a premium by the *Magazine* folks, with that paper, and dubbed the "Quinby Bellows-Smoker, latest style"—I desire to give my opinion of it. It is so badly made and of such poor material that it is entirely worthless. Mine is a regular fraud. I say this only in justice to my brother bee-keepers. Is it right to send out such an article, and call it a Quinby smoker of the latest style? I call it *deception!* What do you call it?" R. P. G.

[Friend G. that is a *hard* question. We don't like to pass judgment upon the motive. You paid only $1.60 for it and the *Magazine*, and as the price of the *Magazine* is $1.50, call the cost of the smoker to you 10 cents, and it isn't so bad, in your case.—Ed.]

☞ Since writing the above, one of these smokers has been put on our table to examine and give our opinion of. It came *via* "Novice" from L. C. Root. It is very poorly constructed, and the leather of which the bellows is made would not stand an hour's use. We only speak of the one before us, and hope that others are much better than this one.—Ed.

Editor A. B. J.—In looking over the "Official List of Awards of the Centennial Exhibition." I find only one award for American Extractors. Will you please inform the readers of the Journal how it comes that several claim to have diplomas for Extractors in the A. B. J.? M. D. T.

[We have examined the "Official List of Awards," and find Murphy's on page 73. It is a big job to look over so many names, and we shall ask friend Chapman to give us a copy of the official notice of the premium being awarded, or refer us to the page in the "official list" where it can be found.—Ed.]

☞ A. G. Hill, of Kendallville, Ind., is issuing a monthly sheet called *The Bee-Keeper's Guide*, which he sends free to all his customers.

☞ J. S. Coe inquired in the Journal—"Who made the first curved-bladed or round-pointed honey knife." F. W. Chapman claims to have done so, in 1870. He says: "I made the first one I ever saw or heard of." It is a nice knife and is well finished, and is kept for sale at this office.

☞ We have had so many "calls" this month that it would make a long chapter to report them. Since we have gathered up our "museum" of articles used in the apiary for the instruction and amusement of visitors, we find them increasing in numbers. All are welcome.

Our Letter Box.

Fulton Co., Ky., April 6, 1877.—"My 15 colonies wintered well. I lost 3, the honey being stolen from them." G. Ilisch.

Woodville, Miss., April 6, 1877.—"Honey is coming in faster than I ever knew it at this season of the year before, but many of the colonies are weak."
Anna Saunders.

Whitesides Co., Ill., April 6, 1877.—"I wintered 83 colonies including some light stocks; 3 starved, one left on summer stand died, another died, cause unknown, and 3 were queenless." R. R. Murphy.

Ripon, Wis., April 5, 1877.—"Spring is cold and late; bees are all in winter quarters; this is the latest that they have been kept back with me for 20 years. I am wintering 110 swarms; I cannot tell what their condition is yet. The last season was very poor. I have always taken the Journal, am very glad to see the improvement you make from month to month." R. Dart.

Hartford, Wis., March 24, 1877.—"We have wintered 734 colonies. They are in six different places. We hire a girl to take care of them in each place, and have other help to use in either as needed. We could not get along with any of the extractors advertised; they are too slow for us. We made one to hold 10 frames, to extract 300 lbs. per hour, and three others holding 8 frames each. We make everything we use in the bee business, except the tin work and barrels. Last season was a poor one; we got 8,000 lbs. of extracted and 1,000 lbs. of box honey. This is not a good place for box honey, as the nights are too cold, driving the bees out of the boxes, and they are slow about returning. We winter in two cellars and four bee houses built on the ground with walls 16 in. thick, filled with sawdust or fine coal." Crowfoot Bros.

Wellsville, Mo., April 2, 1877.—"In the March number of the Journal there is a cut of a hive by Mr. Bull, called the "*Ne Plus Ultra*," and claiming, as the name implies, nothing more beyond—a perfect hive. In the fall of 1867 I bought an individual right of the Langstroth hive of R. K. Otis, now deceased. I paid $8.00 for it. Previous to this I was well acquainted with it, knew the exact size of hive, frames, etc. Had read in the Journal discussions on its merits, particular on its shallowness as being a detriment to successful wintering, particularly in the North. When I commenced making new hives I concluded to change the proportion and adapt it to a colder climate. I was then living in Northern Illinois, latitude 42 deg. I accordingly shortened the hive 2 in., made it 2 in. deeper and one frame less, and it has been a very good hive with me; but I never dreamed I was using the *Ne Plus Ultra* hive till I saw the cut in the March number. My hive and the *Ne Plus Ultra* differs only in two things: My frames are just ⅝ in. shorter, and I don't use nails in the upper corners of the frames for them to hang by. I much prefer a frame to hang on its own top bar. The loose bottom is a nuisance in handling. Now, it may be a good plan for every man to give his own hive a name, but I much prefer to give "Honor to whom honor is due," and I claim all hives with movable frames are Langstroth's, whether they have the exact proportions of his or not." John Barfoot.

Crystal Springs, Miss., Apl. 2, 1877.—"On March 23rd, I had a fine swarm of bees; others on the 25th and 26th. They are getting out early. We have a prospect now for a good crop of fruit." J. W. McNeil.

Montgomery Co., Ind., April 4, 1877.—"I have had a "Bull's run defeat," in wintering bees. I put them in a cellar that I wintered bees two seasons before with success, but the winter just passed has from some cause almost destroyed my apiary. I have about 20 very weak colonies, and am caring for them as best I can. If there had been a flow of honey last September or the first part of October, I am satisfied my bees would have wintered better; there was considerable uncapped honey when I put the bees in the cellar. Some had dysentery, others died without soiling the combs. I think I injured my bees by extracting too closely in the first part of the season. Bees kept in the ordinary way suffered much. I put 48 colonies in cellar, a number of them were small, but suffered no more than stronger ones. The temperature ranged from 32 to 40 deg." Isaac Sharp.

[It is evident that the bees died for want of sufficient wholesome food. You extracted too closely, and what they gathered after was uncapped, and probably very poor honey. Hence the mortality.—Ed.]

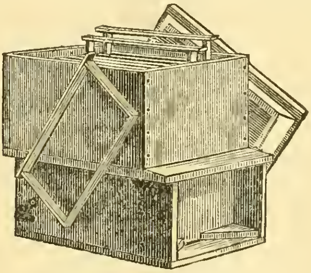
Lawrence Co., Ind., April 2, 1877.—"I am a dear lover of nature and its products, especially the bee. I have 13 colonies in good condition. They have wintered well. They are of a mixed variety, black, hybrid, and Italian. I think the hybrids superior to either the full black or Italian. They are carrying in pollen from the maple and elm. I gave them flour but they soon left it and went for the natural pollen. I have kept bees for 15 or 20 years, and would not do without them, even for pleasure, if there was no profit. This is not a very good bee country, but what honey we get is of the best quality. It is mostly from poplar and white clover. I get from 50 to 100 lbs. of box honey from good hives in good seasons. Last season was one of the best for several years. I propose to sell a part of mine, as I have no time to attend to them all. I am a close reader of the American Bee Journal, and consider it the best bee paper of the day, and no bee-keeper should be without it." G. W. Dodson.

Atchison Co., Kansas, April 4, 1877.—"My curiosity is considerably excited by the article on page 134, by Jewell Davis: 'How to Italianize Blacks,' etc. I want to know all about 'that nursery,' as I want to use it myself. Four years since I went into my garden to hoe cabbages, and found a good swarm of black bees on a small, dwarf pear tree. I fixed up a small box, I had at hand, and put them in. I now have 10 colonies, all in fair condition; four hives very strong. Two of them are Italianized; have them all in movable-frame hives. Although 61 years old, I am as much interested as ever. I have owned and handled bees at different times more than 30 years. The best Italians I have seen came from H. Alley. I say this in justice to him, as I see some one is 'kind o'pitching into him.' That is my experience. Just please tell us all about that nursery." H. S. Heath.

[It seems to us that Mr. Davis has made the matter plain. If there is any particular point upon which you wish information, the better plan will be to write to Dr. Jewell Davis, Charleston, Ill, and he will no doubt supply it.—Ed.]

Schoharie Co., N. Y., March 5, 1877.—"I should like to see a description of the Langstroth hive, with the dimensions of hive, frames, etc. Do they winter well? Will bees winter as well in a frame 14 in. long as in one 18 in. long, the amount of comb being equal in each hive? It is a great advantage for me to use the frame 19½ in. long, if it will winter as well, but my loss has been greater since using the short frame with 10 in a hive, than when I used the long frame with 8 in a hive." N. D. West.

[The dimensions of the standard improved Langstroth hive is as follows: The body of the hive is made of inch boards, and should be dressed on both sides; and is 13x18¼ in. inside, 10 in. deep; ⅜ in. being taken off one end for entrance; portico in front, 4 in. The bottom is nailed on to the sides; a 1-in. strip nailed on to the body, 1 in. from top around the hive, to support the second story or cap; cap is 7 in. deep, and the second story is 10 inches deep.



LANGSTROTH HIVE.

The top bar of frame can be made of ¾ in. stuff, and beveled ½ in., furnishing the comb guide; whole length 19⅛x¾ in.; end pieces 8⅝x⅜ in.; bottom pieces 17⅝x¾ in.

As to wintering—the fall management has more to do with it than the style of hive used. If they have sufficient *good* honey, and are protected on the summer stands, or placed in a good and dry winter repository, with the temperature kept at about 45 deg., it is safe to expect them to winter well.—Ed.]

Starkville, N. Y., April 7, 1877.—"I notice in the report of the N. E. B. K. Association that I am reported as saying: 'It is stated in the bee books that bees begin to labor at two weeks of age;....he thought much younger.' What I really said was that it is stated in the bee books that bees begin to labor in the field at from 2 to 3 weeks of age. While taking no exception to this as a rule, I further stated that they *sometimes* begin their field work much younger. The error is too great to allow it to stand uncorrected." P. H. Elwood.

Winnebago Co., Ill., April 2, 1877.—"My bees increased to 200 colonies last summer, and gave 6,000 lbs. of honey. I put them into winter quarters on Dec. 12th, and took them out Feb. 28th. I lost 3; the rest are all right." H. W. Lee.

Lee Co., Iowa, Apl. 4, 1877.—"Last spring I had no bees. I had some Langstroth hives in the yard and a couple of swarms came and took possession of them. One was black, the other an Italian swarm. I have now 5 swarms. None of my neighbors keep bees. I intend to Italianize them." Henry J. Alvis.

[It was really good of you to place those hives out, where these poor fugitives may find rest and make themselves at home. When they lay up good "stores," and you go around to collect house-rent of them, then you will probably find that they pay more rental according to cost of the building than any other tenants you have.—Ed.]

Georgiana, Ont., March 15, 1877.—"During the winter of 1873 one of my congregation gave me a hive of Italian bees, placing it for me in a nice dry and warm part of the cellar; it came through the winter in good condition, while my kind friend had the misfortune to loose all he had. Hence, I resolved to assist him in return, after I had gotten a fair start. At the end of 2 years, when I had increased to 6, I gave him the same hive back again, but he lost it through spring dwindling and by taking it some 50 miles distant. During the summer of 1875 I succeeded in trebling my stocks and obtained 3 cwt. of extracted honey. But, like many other young bee-keepers, I was over-anxious in obtaining large results, and extracted once too often to my sorrow, for the honey season having suddenly closed, and cold weather setting in, which prevented feeding, I was obliged to go into winter quarters with most of my hives badly provisioned with unsealed honey, which produced dysentery. So that out of 11 I came down to 4, which was rather discouraging, but knowing what was the cause of my loss I willingly proceeded with the determination to guard against such a mistake in future. Consequently from the 4 stocks with which I started last spring, I increased to 9, taking 2 cwt. of honey; the 9 are at present in good condition with the prospect of coming out all right in the spring. Gave them a cleansing flight on that beautiful warm day here on the 1st of March, and now I will not disturb them again till the 1st of May, when all chance of spring dwindling will be past, if the weather be favorable. I use a hive and extractor gotten up by Mr. D. A. Jones, of Beeton, Ont., I think our greatest Canadian bee-keeper, and to whose kindness and willingness to tell all that he knows, I am indebted to a great extent for the interest which I now feel in this pleasurable and profitable pursuit. I think bee-keeping is the most interesting and recreative of all secular employment for a clergyman, and it is perhaps owing to the fact that the greatest discoveries and inventions in this art have been made chiefly by clergymen. I read all the journals and everything that I can find on bee-keeping with pleasure, and anxiously desire to do all that I can to promote this useful art in this great Canada of ours."

D. P. NIVEN.

Warren Co., Ill., March 19, 1877.—"I hear of some losses through this county, but not by practical bee men. I had 80 colonies here at my home put in the cellar on Dec. 16th, full of ice. On Jan. 27 it turned warm and continued so till Feb. 28; since then cold weather has prevailed. The temperature in the cellar ran to 48 deg., and has thus continued. The bees are humming, and carrying out the dead, and appear to be in good condition. At the river I have 40; Mr. Hollingsworth, 100; and Dr. D. G. Campbell 40, all in one cave dug in the sand. A month ago they were doing finely. In another cave adjoining ours, Mr. N. L. Jarvis has over 100 colonies stored. I am glad to see the constant improvement you are making in the JOURNAL, and hope for its continued prosperity."

T. G. MCGAW.

Perry Co., Ill.—"I commenced last year with 6 colonies; I now have 10. I wintered on the summer stands, unprotectected from the north and west winds. There are a great many dead bees. I read Prof. Cook's essay before the Mich. B. K. Association, and should be glad to have him give, through the JOURNAL, his method of queen raising. Also, I would ask H. Alley to give his mode of drumming out a queen. Also, I would like C. F. Muth to give his method of management on the roofs in the city."

JOSEPH BROWN.

Cuyahoga Co., O., March 24, 1877.—"To all appearances, bees are wintering well. I have 25 colonies in the cellar and 5 on their summer stands, boxed and packed in chaff. I think those outside are doing fully as well as those in the cellar. I am a novice in the bee business. I commenced the season of 1876 with 15 very weak colonies; increased to 30 by artificial swarming, raising my own queens snd some for my neighbors. I took only about 600 lbs. of surplus, which I sold at 20c. to 25c. per lb. I use the Langstroth hive and Isham's honey boxes, which have given entire satisfaction. The winter has been a hard one here, and I hear of many losses in wintering in this vicinity. I tried the foundation in a small way, but it was a failure; possibly owing to its being the bleached wax—am open to conviction, however. The wax introducing cage, invented I think, by S. K. Marsh, is a success, with which I have never failed. Whether the great problem of successful wintering shall be solved or not, it is evident there is no lack of theory in the matter, but the 'chaff' will be winnowed in time and results established that will secure a more uniform success. We have a good deal to learn yet and though progress is slow it is none the less sure, and bee-keeping will rank among other branches of industry, subject to the same laws of demand and supply, stimulated by the one and depressed by the other. Very few indeed are likely to make a fortune at it, even the most successful, if we may judge from the reports of Harbison and others. Still it makes a reasonable compensation, and as a recreation has attractions only known to those who have tried it."

C. S. B.

Adelphi, Iowa, April 13, 1877.—"I came through the winter with 68 colonies in Finn hives; lost none by freezing, but have lost some since by robbing, while I was away from home. Have heard so much of comb foundation that I have bought a pair of Finn's plates. I expect to give my bees all the advantages in my reach."

J. J. KISER.

Mower Co., Minn., April 12, 1877.—"On Nov. 10th I buried 62 swarms, and on April 9th set out 59 in excellent condition—having lost 3. Their loss was due to the fact of their having been buried in three pits, and one hive in each pit stood directly under the chimney or ventilator, and all the moisture that collected in the chimney fell directly upon this one, and of course it could not stand a continual bath and died a martyr to neglect. If I could have had time to personally superintend the placing of each hive, the result would have been different. I remove the covers in wintering. I have buried my bees 11 years in succession and have never lost any (that were in proper condition for wintering) when I have in person placed them in the pit. The advantage gained by this method is that the bees are left perfectly quiet until taken out, and the temperature is very even, the thermometer standing at about 45 deg. all winter."

I. INGMUNDSON.

Macomb Co., Mich., April 17, 1877.—"Out of 54 colonies I have lost 26, and have several more in a poor condition. I think that my bees gathered largely from apple pumice from a cider mill near by; they did not die from an insufficient supply of honey. A neighbor, living about 4 miles from me, keeps his bees in a common box hive, and has lost 22 out of 29 colonies. He says that he will adopt the movable-frame hive. The loss of bees is very great through this section of Michigan, a large percentage more in common than movable frame hives."

WM. P. EVRITT.

Des Moines, Iowa, April 16, 1877.—"I have had from 20 to 30 swarms of bees for 3 years, in this city. Last year I sold down to 15; increased to 28; sold $212.00 worth of honey in small frames. I have used 12 of Finn's double-walled hives for 3 years. I winter on summer stands, and have never failed to come out strong in spring. Two swarms have been in the Finn hive for two years, without having a comb moved; one of them cast a swarm last summer, it filled its hive and stored 60 lbs. of honey in three weeks. I have purchased more bees this spring, and shall put them all in Finn hives as soon as possible; having used it for five years I believe it to be the best. With this hive and THE AMERICAN BEE JOURNAL, no one need fail of having bees and honey."

MRS. A. BRACKETT.

Harrison Co., Ind., April 15, 1877.—"Bees are working on yellow willow and hard maple. Everything looks favorable for a good honey harvest." DAVID GRABBLE.

Fayette Co., Ind., April 15, 1877.—"I wintered 42 colonies in a house with a 6-inch wall filled in with sawdust, and lost one. I had 8 on their summer stands, packed in corn fodder and lost 2. Those in the house did the best." DANIEL WURTH.

Ingham Co., Mich., April 20, 1877.—"I have wintered 65 colonies, and they are all in fine condition. Last season I wintered 64 colonies, and for 2 years have not lost a single colony, and have but little spring dwindling." JAMES HARPER.

Jefferson Co., Iowa, April 18, 1877.—"My bees have wintered well, and are now at work." ANDREW SIMONS.

Plumas Co., Cal., April 12, 1877.—"I wintered 30 colonies on summer stands; they are all right and have been working lively on willow and alder for the last month. I don't favor wintering under the snow; it is too damp. I have tried it." E. CULVER.

Vermont, Ill., April 19, 1877.—"I commenced last year with 19 colonies; increased to 56, bought 25, making me 81. I lost and sold 6, so that I have 75 to begin with this year. I got 2,456 lbs. of box honey."
HARDIN HAINES.

Dearborn Co., Ind., April 10, 1877.—"My bees are all alive, and are gathering pollen nicely. I noticed several combs of brood and some drones in a hive in Feb. The hive had a fertile queen."
S. HUMFIELD, Jr.

Pottawattamie Co., Kansas, April 8, 1877.—"My bees are gathering pollen. The peach blossoms are nearly ready to expand. I hope we shall have a good season, and that the 'hoppers' will not trouble us seriously this spring." JACOB EMMONS.

Crawford Co., Pa., April 6, 1877.—"I started last winter with 133 colonies; 103 wintered in-doors and the balance out, in large double hives, packed all around with buckwheat chaff and hay; chaff at the sides and hay on honey-board, with slots for surplus boxes all open. With four exceptions they wintered splendidly, very much better than those in the bee house. The bees smothered in the four, by the entrance becoming stopped up with snow. I was away from home a part of the time, and neglected them, The hives were 2 to 3 feet under the snow, part of the time. I shall hereafter winter out-of-doors altogether, as I have never wintered in-doors to suit me. With a few hives in a house they do well enough, but with a large number and the house closed up, so as to maintain a temperature of about 40 to 42 deg., the bees were out of the hives too much; the air is too close and impure, and in order to overcome this defect I have to open the ventilators so wide that the temperature sinks below freezing point; and in this condition, according to my experience, they are worse off than out-of-doors, without protection save that given by a single board hive."
H. S. SEE.

Atchinson Co., Kan., April 20, 1877.—"My bees wintered well in the cellar. Peaches are in bloom now and honey gathering has commenced." F. SCHLETZBAUM.

Montcalm Co., Mich., April 19, 1877.—"I wintered 190 colonies in the cellar. They came out in good order." H. M. ROOP.

Blackhawk Co., Iowa, April 14, 1877.—"Bees wintered well here. I winter in the cellar under my kitchen, and ventilated through the stove pipe. I lost 4 out of 35 colonies; they were queenless, but had plenty of honey. The Italians are more active than blacks. I would not do without the JOURNAL if it cost $5 a year."
L. L. TRIEM.

Butler Co., Pa., April 18, 1877.—"I put my bees into winter quarters on Nov. 25; took them out Feb. 7, returned them the 9th, and put them on their summer stands April 3rd. I lost but one out of 100 colonies. They are all Italians and in good condition. I wintered part in a cave and the balance in a bee-house; the walls filled in with 5 in. of clay. I used chaff boxes in place of honey-board. They are dark Italian bees, such as Ch. Dadant imports—none of the light-colored Italians for me. If a hive dwindles away in spring, it is one of those 'beautiful light ones.'" JACOB PATTERSON.

Iron Co., Mo., April 16, 1877.—"A lady got me to 'doctor' her bees, last week. They were in the 'Buckeye,' a hive that has an upright case; the frames being hinged on a carriage, the bottom of which is an extensive moth trap. One hive had not been opened for 2 years and the other was filled last year. The box room was scanty and inconvenient, while boxes had been put in, but in one hive they refused to work in them because they had no starters. The bees had made all fast in the case, both top and sides. A large knife had to be freely used before the carriage-bearing frames could be withdrawn. Both had plenty of moths and roaches, and from one I took a gallon of dead bees; yet the colonies were strong and stores abundant. The hive deserves an advertisement as a nuisance. Most of the bees hereabout died last winter; cause—worker comb filled with honey and breeding stopped. Some went in with 20 stocks, but came out with one. Nearly all in old box hives or gums, and left on the summer stands." WM. CAM.

De Vall's Bluff, Ark., April 16, 1877.—"Having sold some, I commence the present season with 54 colonies. Last season I commenced with 45, and secured over 5,000 lbs. of very choice comb honey, in sections, and had an increase of 50 per cent. in stocks. This season I expect to beat that."
W. W. HIPOLITE, M.D.

St. Clair Co., Ill., April 21, 1877.—"Bees did moderately well, last year, but I lost most of them during the winter. On examination, I think it was dysentery, caused probably by the sour, uncapped honey, with which the combs were partially filled. Have just the number of colonies now that I started with last spring, but stronger ones. Want of proper attention the chief cause of loss. Generally, bees wintered well here." L. C. BORNMAN.

Correspondence.

For the American Bee Journal.

Corn Blossoms and Honey.

Mr. Editor:—In the April number of your very valuable Journal, W. B. Rush says "Corn gives much honey and plenty of the very best pollen." With the latter statement of this quotation I have no controversy. Corn tassels afford an abundance of pollen, and are doubtless of great benefit to bees in that respect; but friend Rush is certainly mistaken in regard to the yield of honey from that source. I have many a time watched the bees as they were working on the corn, and I could never see one pause for an instant and use its proboscis. I think if your correspondent will go into the corn fields, and observe closely, he will be convinced of his mistake. His bees have been gathering pollen from corn, and honey from something else. I should like to visit Mr. Rush when orange blossoms are plenty, and try some of his orange-blossom honey.

New Castle, Ind. M. Mahin.

For the American Bee Journal.

How to Introduce Queens.

There seems to be many ways this may be done, if all is true we see in our bee papers. No doubt each one who succeeds, thinks his plan the best. This may be true in my own case; however, for fear I may be tedious, I will proceed to give my method, hoping that all who try it will report either to myself or through our much-esteemed American Bee Journal.

Take the queen desired to be introduced, cage her with a few young bees, a day or two old, taken from the hive into which you wish to introduce her, these give her the scent, by being in the cage with her, of this hive. Next take a frame of comb and bees from the same hive, containing hatching brood and young bees, place it in a hive a few yards away from the hive from which the frame was taken; suspend the cage containing the queen by this frame. In an hour or two nearly all, if not all, the old bees on this frame will leave and return to their old stand. The queen can then be cautiously released on this frame containing mostly young bees; watch them and see if they attack her, if not, let the hive containing her and one frame remain where they are until night. However, before night, go to your old stand—the one from which your frame was taken—hunt up the queen, cage or destroy her as you wish, take all the frames except one or two, brushing off the bees, and place them in the hive where your new queen is. At night put the hive containing the new queen on the old stand, removing the old hive containing the bees, away some ten yards.

Next day most, if not all, the old bees on going out will return to the old stand and enter, ladened, the hive containing the new queen. About 12 o'clock on that day go to your old hive, open the entire top, and if the bees do not in a half hour leave this hive and return to the old stand, take the remaining frames and hive and brush off all the bees in front of the stand or hive containing the new queen, they will enter and not disturb the new queen. Be certain and do not open the hive containing the new queen during that day. Take the frames left and put them in some other hive.

This plan consists first in giving the queen the scent of the hive into which you wish to introduce her, by caging young bees with her from that hive. Secondly, by releasing the queen among young bees which seem never to attack a queen. Thirdly, by causing the old bees, the day after, to enter, ladened, the hive where the new queen is, in which condition bees seem never to attack a queen. And lastly, by forcing the bees to enter the same hive in a queenless and completely demoralized condition, in which bees seem glad to find a queen. I have no controversy with others about their plans, mine has been successful in my own case. I am willing others shall have it. J. W. McNeil.

Crystal Springs, Miss., March 14, 1877.

For the American Bee Journal.

American Institute and the National.

I am in receipt of a letter from Mr. J. S. Coe, in which he says: "After several interviews with the officers of the American Institute, I have received from them the following proposition: They agree to admit the American Bee-Keepers' Association including all its members, as one individual, for the purpose of exhibiting their products and implements, and to allow table space up to 100 feet in length and also space for the exhibition of hives, extractors, etc.; to allow each individual member of the association or their agents to sell and deliver their products and implements, or sell by sample and take orders.

"They agree to issue to each regularly-appointed delegate three free admission tickets to the number of two hundred delegates, and probably up to five hundred. For this space and these privileges the fee will be $7.00, and they give me to understand that if we make a permanent arrangement with them they will remit this fee and deal liberally with us in every way."

I fully agree with Mr. Coe, when further in his letter he says: "It seems to me that this is a golden opportunity for bringing our Society into public notice and favor and to establish it as a permanent institution."

Brother bee-keepers let us hear from you on the subject. Shall brother Coe effect the arrangement? How many of you will be on hand with samples of your honey, hives, extractors and other implements of the apiary? I hope there will be a good attendance and a fair display, one that will reflect credit upon our pursuit and be an honor to American apiarists. Let me urge, too, upon all bee-keepers to assemble in their counties and organize county societies and elect a delegate to the next meeting of the National Society; this delegate can act as your agent also in seeing that any article you may send is properly displayed.

Mr. Coe further writes: "We have to the middle of June to decide the matter." I therefore urgently appeal to all bee-keepers to give an expression in the June number of the Bee papers, or address Brother Coe or myself on the subject.

Wm. J. Andrews,
Pres. National B. K. Assn.

For the American Bee Journal.

The Price of Queens and Colonies.

Can a bee-keeper get a living by producing good, unwarranted queens for one dollar? No! and I will prove it. A good hand in the bee-keeping business cannot, without help, raise in the four summer months (June to Sept.) more than 500 desirable queens; *i. e.*, raised in good colonies, for the first part of their growth at least. It is now certain that queens nursed in poor colonies, or during time of scarcity, are generally of little value.

These 500 queens are sold nominally for $500. From this deduct the expenses of advertising, stamps, cages, mailing, etc.—about $100—leaving $400. But these $400 are not *net* profit; for to raise 500 queens we destroy at least 50 good colonies. If we count these at only $4 each, we have $200 more to deduct, besides the cost of honey or sugar to feed them; which still decreases the $200 remaining.

Had we put all our energies to produce honey, our 50 colonies would each have given at least 20 lbs. of honey and 25 good swarms; the whole worth about $200. We would have had (besides plenty of time to do some other business, or to work 250 colonies more) a net profit of at least $600.

Then the "dollar queen" business was a poor idea. Its inventor and propagator was not long in finding that his employees would give better results by working at anything else, and he has left the dollar business to others, after a short trial.

In Italy, wages are very much lower than in this country; you can hire a good, intelligent young man, over 20 years of age, for $60 per annum, board included, in the large cities; you can hire the same in the country for less than 20 cents a day, without board; yet you cannot buy queens for $1. In spring and summer they are worth from $1.20 to $2. It is only in Sept. that you can buy cheap queens, when the peasants brimstone their bees.

It is the same in Germany, where hybrid queens are sold for more than $1.20 each, and in that country, also, labor is cheaper than in America.

Are these dollar queens profitable to the buyers? No! Cheap product is very often dear. No doubt some have been satisfied with them; but I have received a number of letters showing that even for nothing these queens would have proved *too dear*. One of my neighbors has introduced 20 such queens in his apiary of 120 black colonies and now he cannot see in which colonies they were introduced, only two of his colonies having been hybridized by this introduction.

I do not expose these dollar queens for business sake. We have resolved not to sell a home-bred queen this season; we have about 100 colonies to Italianize for a neighbor, and it is enough to use what we will raise, after replacing the hybrid queens of some of our apiaries.

The price of colonies this spring is also greatly reduced. Such a low price cannot be maintained without loss. A good colony of black bees, in a box hive, can be sold from $3 to $5. The value of such a colony, in Sept., would be as follows: Hive, 50c.; 2 lbs. of wax, 55c.; 25 lbs. of honey at 8c., $2; black queen and bees, $2; total value of the colony, $5.05.

If the owner of these bees cannot sell them in spring for more than $3, his queen and bees are sold for nothing; and he is not paid for his trouble, expense and risk of wintering. Had he killed his bees in the fall, to take the contents of his hives, he would have avoided all the trouble and risks of wintering, and obtained just as much money. Many bee-keepers kill their bees every fall. The price of bees in box hives is not their true value and should be increased.

It is the same with Italian bees in movable-comb hives. Combs and honey in movable frames are worth more, because the combs can be kept, and extracted honey is worth more than strained. In Sept. a good colony of Italian bees in a carefully-made and painted movable-frame hive, should be estimated thus: Hive, $2; 8 Quinby or 10 Langstroth combs, $2; 25 lbs. of honey at 12c., $3; value without bees, $7. We can realize this amount by killing our bees, selling the honey and keeping the combs for the following year.

But we winter our bees till spring, to sell to our patrons. The cost of wintering cannot be estimated at less than 20c.; chances of wintering, 30c.; cartage and guarantee of safe arrival, 50c.; advertising, circulars, stamps (these items with us amount to $150 a year), $1; total expenses, $2., to be added to the price. Then the hive, *without the bees* is worth $9 in April. By selling colonies at $10, tested queens and their bees are sold for $1; at $9 queens and bees are given away!

By brimstoning our bees we could have pocketed our profit in the fall without risks or trouble. By selling colonies, we have to replace the hives by new ones, and swarms put into empty hives will bring far less profit than if hived with combs. A good swarm put in a hive with comb, will sometimes give as much as 50 lbs. of surplus honey, and remain strong for winter. If we killed our bees we should avoid the labor of answering from 20 to 50 letters of inquiries every week.

Notwithstanding, at $10 per hive, our tested queens and bees are sold for only $1, should we send a colony whose queen was replaced by her bees, without our knowledge, or whose workers or queen are not in accordance with the fancy of the purchaser; or if the colony is a little below the average strength, we are unhesitatingly called "humbugs;" not privately, but in full meetings of bee-keepers, as we were last year!

Let us all then direct our energies to producing honey, reducing our swarms to the smallest possible number; for should we continue as we have done so far, we shall be compelled to brimstone our bees.

Some object that honey is a drug on the market. No! Honey is becoming a staple article, for all the honey produced is eaten every year. Honey will give profit at 10c. per lb.

Our honey sales never brought us abuse; and during 10 years of business in selling queens and bees, we have received many praises, but we have also been greeted with accusation enough to make the business very irksome, without a compensating benefit. The bee-breeder who has never been accused of misdealing, is one who has never sold a bee. CH. DADANT.

Hamilton, Ill., April 10, 1877.

For the American Bee Journal.

How my Bees Wintered.

Last fall I had 51 colonies of pure Italian bees. I cut holes through the combs of nearly all, for winter passages, packed the caps full of hay and left them on their summer stands. Owing to the scarcity of honey in the fall, and my not having time to give them the attention they ought to have had, some of them were deficient in stores, more so than I supposed. Some of them were also deficient in bees. Now for the result. Nine either starved to death before I was aware that they were in danger, or perished because there were not bees enough to maintain the necessary heat; and three, with plenty of bees and honey, died of dysentery. I am inclined to the opinion that these died of too much pollen. The combs in which the bees clustered contained a great deal of it, much of it being left in the bottoms of the cells after the honey had been eaten out. The bees were full of pollen.

I have observed that bees that are fed late in the fall, but not too late for the food to cap over, whether fed with syrup or honey, invariably winter better than others. And the reason I believe to be that there is little or no pollen within reach of the bees. Last summer I had a colony that became queenless, and no young bees were raised after August. They were also destitute of sufficient stores for winter, although there were plenty of bees. I gave them a queen in October, and having some very thin extracted honey which was almost sour, I fed it to them, thinking that they would raise young bees enough to live through the winter, but though the honey was stored away and properly sealed, the queen laid no eggs. I expected to loose them, but have been happily disappointed. They have wintered well, began to breed early, and are now one of my best stocks. The bees were all old, and I attribute their longivity to the fact that the honey they had to winter on contained little or no bee-bread. If bees eat much bee-bread, they must either have opportunity to fly or they must perish.

I have now 39 stocks, all of them strong but one, and that, though rather weak, is building up nicely, and will be ready for business by the time white clover blooms. One of my strong stocks is queenless. I am building it up by giving it brood from such hives as can spare it. It will soon have a queen.

M. Mahin.

New Castle, Ind., April 3, 1877.

For the American Bee Journal.

"Apiarian or Apiarist."

I see by the last Bee Journal that the editor's *apiarianism* is not sound. He says *apiarian* is an adjective and not a noun; will he give us his reasons why it is not a noun. We have a deal of respect for Webster's Dictionary, but on apiarianism it will set us back to the time when every swarm of bees had a *king bee.* What are the words *amphidian*, and *sectarian*, nouns or adjectives? Do you think that *sectarist* and *amphidist* would be better? What makes a word right or proper? Is it not its use by reputable writers? of course you will admit that; then look at the authorities. Langstroth, Quinby, and Wagner, ought to be the authority that would settle the dispute on *apiarian* and *apiarist!* The fact is *apiarist* is a word that is hardly ever used by apiarians, unless it be some novice that has gone to a Dictionary, and launches forth with the word *apiarist.* Thinking that he has "made a grand discovery by which he shall be known to all posterity." Now, Mr. Editor, we want you to consult the authorities and set the Bee Journal right.

Look in Vol. 7, page 111, and you will see what the founder of the Journal says. I think you will find that the word *apiarist* is out of use, if it was ever in use; and more, you will find that the definition of *apiary* and *apiarist* in Webster, is not what is meant now by apiary and apiarian. We are perfectly willing to let Prof. Cook and others have Webster's definition, if it will satisfy them. Webster says: "*Apiary* is a *place* where bees are kept; a *stand* or *shed for bees.*" Apiarist is "one who keeps an apiary." (We Italicise a few words to draw particular attention to what an apiary is). Consequently, according to the above definitions, an apiarist is a person that keeps a stand or shed or place where bees are kept. It is not necessary that he should tell a bee from a toad, to be an apiarist, according to Webster. If *apiary* now means a shed, stand, house, or cellar, then my apiarianism is not sound.

I take apiary to mean a number of stands of bees; apiarian, the person that keeps and manages them; apiculture is the science or art of bee-keeping; apiculturist is one who practises or understands the art of bee-keeping; and apiarianism is the general belief of apiarians. The next man that makes a dictionary (if he is a *live man*) will have all these words in it; and if he does not, he ought to; for we need every one of them. And I think that when Prof. Cook has looked this matter up he will haul in his horns (one at a time) and not "buldoze" us any more with *apiarist*, for it is appar(i)ent that his authority is antideluvian.

N. Cameron.

Lawrence, Kansas.

[Friend N. Cameron suggests that we would be going back to the time when a "king bee" was acknowledged, should we adopt Webster's use of the word *apiarist* for the noun. He bases his principal argument for the use of *apiarian* as a noun, on the fact that the pioneers in apiculture used it thus. Is *he not*, therefore, drifting back towards the "king bee" age? The best of writers and scholors, to avoid ambiguity, prefer a difference in the orthography of the adjective and noun, in the use of such words, *e. g.*, as anatomist, apiarist, botanist, entomologist, hydropathist, physiologist, etc., etc. Webster, and all lexicographers, are the authority, for the position taken by this Journal. Worcester defines the word apiarist: "a keeper of bees"—not *toads!* A "keeper" is "one who has the management, care or superintendence of anything;" hence, a *beekeeper* (or apiarist) is *not* merely "a person that keeps a stand or shed where bees are kept" — but one who has the care, management or superintendence" of the BEES themselves! Then again, when it is known, that in the last edition of Webster, sixty or seventy of the ablest philologists and scientists of any age were its authors, the reliability of its position should scarcely be questioned. For these reasons, and others that might be given, did our space permit, we "hold fast the form of sound words."—ED.]

Michigan B. K. Association.

This Association held its annual meeting at Lansing, on Wednesday and Thursday, March 14 and 15; Prof. A. J. Cook, Pres.; A. B. Cheney, Sec. *pro tem.*

After the opening exercises, consisting of prayer and music by the choir, a paper on "Foul Brood," by C. F. Muth, was read. A short discussion followed—all agreeing that foul brood was the greatest difficulty which apiartsts had to contend with.

W. Porter had introduced foul brood into his apiary by purchasing old comb. His plan has been to destroy comb and all; but after hearing Mr. Muth's paper, he believed *that* plan to get rid of the disease was worthy of a thorough trial.

Dr. Whiting, of Saginaw, believed the only way to get rid of it was to destroy the comb. He had no faith in any known chemicals to effect a permanent cure. After destroying the comb he removes his bees into new hives, which have been drenched with hyposulphate of soda or a solution of common salt. He has never tried Mr. Muth's remedy.

L. B. Baker wished to know if the disease could be communicated from one colony to another.

The president said the disease is supposed to be fungoid in its nature, and the spores are liable to be carried by the bees from one hive to another.

A letter was read from Mr. Kelly, of Ionia Co., in which he asked the convention whether any of its members had ever communicated foul brood to their apiaries by introducing foreign queens. This question was not answered.

Pres. Cook then delivered his inaugural address.

"Honey as Food," a paper by Julius Tomlinson, was then read,

Messrs. Porter, Hunter, and Ross were appointed a committee on the various apparatus exhibited; and Messrs. Massey, Dicer and Allen, on resolutions.

C. W. Garfield and wife sang the song, "Musings of an old Piano," and the convention closed its first session.

THURSDAY.

H. T. Ross, of Milford, gave his experience of 50 years in wintering bees. He claimed they might be wintered either on summer stands, in the cellar, or by burying; giving preference to the latter. He cited cases where he had kept small stocks, mere nuclei, by the latter method. He argued that there should be air space above and below, placing much stress on ample ventilation.

A paper on "Wintering bees on their Summer stands," by J. H. Townley, was read.

Following this paper an interesting discussion took place. The general opinion seemed to be that bees might be safely wintered, either in the cellar or on their summer stands. Mr. Hetherington, of Saginaw —brother of Capt. Hetherington, of N. Y., who has upwards of 1,000 colonies—gave preference to packing either with straw or chaff. But an evident majority were in favor of wintering in the cellar. Letters were read from nearly all parts of the State, announcing that bees are wintering finely. It is very plain that Michigan bee-keepers do not look upon wintering as any longer a difficult thing.

James Heddon read a paper on "Desirable Combs—how Secured."

A paper on the "Composition of Honey," by Prof. R. F. Kedzie, of the State Agricultural College, was read.

Mrs. L. B. Baker read a paper on "My experience as a Bee-keeper."

For the first time in the history of this Association, ladies were present and took part in the exercises. Miss "Cyula Linswick" contributed a paper entitled "Shall women keep Bees?"

Otis Fuller read an essay on "Farmers as Bee-keepers." He thought that if they were adapted to the business they might make bee-keeping very successful, and proved the assertion by relating his own experience.

Frank Benton, of Detroit, presented a paper entitled "The Apiarist." He claimed it to be the duty of persons contemplating bee-culture to learn its theory. In Germany a young man who wishes to engage in the business first serves an apprenticeship under some practical and learned bee-keeper, where he acquires skill and at the same time makes himself familiar with all the theories pertaining to the breeding of bees. Mr. Benton dwelt at length on the extensive apiaries of Germany, and their many able text-books and journals published in the interest of bee-culture.

The person who would become a successful apiarist must be possessed of intelligence, a disposition to investigate, *i.e.*, an inquiring turn of mind, and an inclination to be thorough in what he undertakes. Without these he will not sufficiently master theoretical bee-culture as to enable him to understand the practical difficulties he will surely encounter. He must have that disposition which leads men deeper and deeper into the mysteries of nature—which makes them enthusiastic in the pursuit of knowledge. Industry and perseverence must be shown by the bee-keeper. He must labor with both brain and hand. Mr. Benton thought that Americans might take, with profit, a few more lessons of their trans-Atlantic friends, especially in patience and thoroughness; but believed that, with their practical tendencies, our people might yet lead the world in apiculture.

W. L. Porter, of Northville, read a paper on the relative merits of the "Italian and Black Bees," claiming superiority for the latter race.

A lively discussion followed. No one present fully concurred with the writer of the paper. The president said that while Mr. Porter's premises were correct, his conclusions might not be. While black bees are the best to go into boxes, that is not a conclusive argument in their favor, for honey in boxes is not always as desirable as honey in small frames. Again, the Italians may dwindle more rapidly in the spring, owing to their more active habits, which is really in their favor. But the apiarist should prevent early spring flights and thus remove the difficulty.

It was voted that the papers read should be placed in the hands of the Sec'y of the State Board of Agriculture, that he may select from them such matter as he deems valuable, to be published in the annual report of said board.

The following committees were chosen, in accordance with the suggestions of the president, and they will report at the next meeting:

Wintering—Otis Fuller, Mason; A. B. Cheney, Sparta Center; G. E. Massey, Lakeview.

Honey Plants—Fish Bangs, J. A. Porter, and W. J. Beal, Lansing.

House Apiaries—H. A. Burch, So. Haven; W. L. Porter, Northville; Dr. Whitney, Saginaw.

Markets—J. H. Heddon, Dowagiac; A. H. Russell, Adrian; Dr. Hunter, Manchester.

"Shall Farmers keep Bees?" was the subject of an essay read by A. B. Cheney.

A paper on "How may we Improve our Bees?" by Ch. Dadant was read.

A paper on "The reciprocal Benefits of Bees and Plants" was read by Prof. W. J. Beal, who illustrated his subject by numerous drawings, and showed that while bees were busy in gathering honey, they performed another great part in the beneficent plans of the Creator, by carrying the pollen of male seed-bearing plants to the female plants.

The Committee on Apparatus on exhibition reported as follows: "Having examined the fixtures, apparatus, honey, etc., on exhibition we would report the following list:

"The patent bee hive by A. H. Russel, of Adrian, claims to be a combination of the movable frame and the box hive. It has merits which commend it to careful consideration of the apiarist. Mr. Russel also has on exhibition a honey box with glass sides, made so that the side may be taken out without destroying the box or breaking the comb.

"A movable comb hive with sectional honey boxes, by Barker & Dicer. The boxes are so arranged that they will contain five sections of honey which may be separated without breaking the comb, each section weighing from 2 to 2½ lbs. This honey box is worth the attention of bee-keepers.

"H. T. Ross exhibits a two-story hive, also a Diamond frame hive, which he thinks is moth proof.

"A. I. Root (Novice) exhibited a collection of apiarian supplies; among which is his lamp queen-nursery, which has merits worthy of consideration. Among his collection is a modified Gallup hive, spring balance, binder for *Gleanings*, candy for feeding, bee knife, bee veil, and sectional frame for surplus honey.

"Prof. Cook exhibits a bellows smoker of unquestionable merit.

"L. C. Blood exhibits three sectional frames of honey.

"W. L. Porter has a box of buckwheat honey, nicely stored in a sectional box; comb guide, and a piece of worker comb that was used by a fertile worker.

"Specimen copies of the bee papers of the U. S., viz.: THE AMERICAN BEE JOURNAL, Chicago, Ill.; *Bee-Keepers' Magazine*, N. Y., and *Gleanings*, Medina, Ohio. Your committee would recommend every bee-keeper to take at least one of them.

W. S. PORTER.
E. HUNTER."

The Committee on Resolutions reported as follows:

"Your committee respectfully submit the following:

"*Whereas*, We have been permitted to meet on this our annual convocation in the Supreme Court room in the city of Lansing, Mich.; and

"*Whereas*, this Association has been well attended and all thereby largely benefited and encouraged; and

"*Whereas*, We desire to express our sincere thanks for favors and aid furnished us by the citizens of Langing, therefore be it

"*Resolved*, That we tender our thanks to the landlords and citizens of Lansing for the attention paid us. That we are under obligations to Messrs. A. E. Young, H. M. Turner, G. A. Husty, Misses Mary E. Baker, Ella Baker, and Prof. Garfield and lady for good music furnished during the session, and to Miss Addie Berridge who presided at the organ; also

"*Resolved*, That we feel grateful to the Revs. Dr. Duffield and Cooley, for their personal attendance and services; also

"*Resolved*, That we tender our thanks to those who supplied such a nice collection of apparatus for exhibition; to absent friends for the excellent papers submitted; and to the large number of ladies whose presence tended so largely to encourage the interests of the Associaiion; also

"*Resolved*, that we feel especially grateful to Prof. A. J. Cook for his untiring and persistent labors in behalf of the Society, and for the able and unpartial discharge of his duties as presiding officer; to the reporters of the press for favors granted; and to the officers of the Agricultural College for courtesies extended.

"*Resolved*, that these resolutions be published in the city papers of Lansing and the various bee papers."

G. J. MASSEY, *Chairman*.

It is evident that the bee-keepers of Michigan, although weak in numbers, do not lack that enthusiasm which is so essential to win success in any calling.

The next annual meeting will be held at Adrian.

A. B. CHENEY, *Sec'y*.

[Some of the many papers read before the Association will be found on the following pages; others will be publshed as fast as our space will permit.—ED.]

Inaugural Address.

Ladies and Gentlemen of the Michigan B. K. Association:

I beg leave upon this pleasant occasion to congratulate you, that our Society—the oldest living organization of its kind, also the second one organized, so far as I can determine, in the United States—is no less active, vigorous, and useful withall than it is aged. That it has been a moving force in our State, aye, and in our country, needs no proof at my hands. Yet the fact that the value of such associations has been called in question by one of our first editors and writers in this department, and more recently by one of our own members, one whom we all respect, and whose wisdom and experience takes no second place among us; together with the fact that my own convictions are most emphatically opposed to this view, have led me to select the following as the subject of my address:

Are apiarian associations— like ours — worthy of encouragement?

Of course I need not advocate before an intelligent audience like the one I am now addressing, the importance of social intercourse, especially between those of like occupation and interest. That the tendency of such gatherings is to broaden our sympathies, and to heighten our regard for each other, and thus surely to elevate and refine, no one will dispute. As this benefit—no inconsiderable one you will all grant—is universally conceded, I will not tarry in its discussion longer than to express the hope that in future this feature may be indefinitely advanced, by the more general attendence, and participation of our wives, sisters, and daughters. I sincerely hope that in all our future meetings, no inconsiderable portion of our audiences and essayists shall be those than whom none should be more interested or may be more profited, who heretofore have been too much shut out from the pleasures, profits, and healthfulness of out-door employments.

The second point I would make is the fact, which I am sure I shall be able to demonstrate, that these gatherings, which I believe can only be successfully sustained by a State or States association, richly repay all the trouble and expense they may cost in advancing the interests of apiculture.

This point might be sustained by anology alone. What interest has ever yet succeeded in attaining to any great proportions, without calling to its aid the co-operated influence of its patrons—influence whose very existence depends upon association? The very universality of conventions among all classes, composed of those of every art, trade and profession, is of itself sufficient guarantee of their value. So we may well conclude that if the apiarists of our State and country intend to take a position worthy the important interest they represent, they must continue to sustain and make even more fruitful of good, this and kindred organizations.

But does our experience, now covering nearly a decade, sustain this argument from analogy. How many of us there are who would give a quick yes to this question? Whatever may be affirmed of other industrial arts, no one will question the fact that successful apiculture is based on both science and experiment. The progress of the art, yea and of individual success as well, points no less to scientific research than to wise and wide experience.

We have only to mention the names of Huber, Siebold, Dziertzhon and our own Langstroth, to remind you how much scientific research has done for the apiarist. Three of these names, and I may well add that of Quinby, recall the immence array of experience which so mightily aids the apiarist of to-day. Now must each glean all the scientific truths, discovered and unknown, and gather all the experimental facts known and yet to be discovered, for himself? This is so utterly impossible that the very question seems absurd to any one who rightly understands the subject. Yet how can we pass as by one mighty stride these lower rounds of apiarian progress so well as by being lifted by those of more knowledge and experience, at just such meetings as this? Here the veriest novice, if studious and attentive, may learn so rapidly that he has only to confirm his yet crude ideas by a comparatively brief personal experience that he may labor with good hope of no mean success.

It may be said that our numerous treatises and periodicals may better accomplish this purpose. They may be studied, not merely heard and then lost. Far be it from me to discourage the reading or underestimate the value of our bee literature. I believe that successful apiculture demands that these invaluable aids be likewise appropriated. Yet I believe that without our conventions these would languish. Each reciprocally sustains the other. Without conventions, our journals would go begging for substance, while both the journals and text-books would look in vain for remunerative patronage.

The above suggests another way in which these conventions powerfully aid in advancing the interests of bee-culture. There is no agency which is so powerful in recruiting the ranks of our brotherhood. If our meetings are migratory, as they should be, people in all parts of the State will learn of the inducements to become apiarists, and hasten to avail themselves of its pleasures and profits. Our local and State press which would otherwise be comparatively barren of such facts and figures, will reveal to all our people a new avenue for profitable thought, study and exertion, and hundreds will be led to adopt one of the most pleasant and remunerative of rural pursuits, and the liquid sweets of myriad flowers will no longer volatilize to be dispersed by the summer breeze, but will be gathered up and made to contribute to the wealth and comfort of our people. Surely he who said "Gather up the fragments, that nothing be lost," will add his kindly blessing to our labors, which aim to foster the good work of storing up the unlimited sweets with which nature has filled the flowers of the field, forest, and even wayside.

Again our discussions here, if wise and well ordered, will lead each of us to new thoughts, experiments and research. How many questions there are, both of science and practice, which as yet are wholly unsolved. For instance, who knows as yet, just why the bees are led to build drone comb, all the causes which impel to swarming, just what accelerates the development of the queen? In practice, too, what a wide difference of view, as to house apiaries, artificial swarming, artificial foundation, wintering, kind of honey to work for, etc., etc. Now where, I ask, is the word to be spoken, the thought uttered or the hint dropped, which shall lead to these discoveries or settle these yet mooted questions, unless forsooth it be right here in these conventions. In fact it should be our constant aim to stimulate to the utmost in our power, thought, study, observation, and experiment, which should have for its ultimatum the complete elucidation of apiarian science and the full perfection of apiarian practice.

Again the tendency of these gatherings must be to impel each of us individually to better work and brighter success. As we listen to those who have far outstripped us, in their escape from reverses, and in their pecuniary gains, we resolve that we shall do as much as they. We know that luck is no factor in this problem, and we are bound that we will acquire that skill and knowledge that shall know no superior. We sit at the feet of these Gamaliels, most attentive to gain and assimilate their every thought, reach out to grasp their better methods, and if we do not at once advance to the front we are conscious of substantial progress, and thus take courage.

The last point which I shall urge is the opportunity afforded by conventions to induce concerted action towards the accomplishment of that which cannot be gained by individual effort. The subject of adulteration, proper grading of honey, and whatever has to do with the general market; these and all kindred subjects which concern the general welfare of our business can only receive that attention which shall point toward efficient remedy of existing evils through the aid of organization. If it proves true, for instance that we are to sustain our markets, by the high character of the goods we offer, how much sooner may we hope, through our conventions, to persuade all to put nothing in the market but what shall charm the eye and captivate the taste of the consumer. By wise cooperation in these directions, we may soon hope to change the burdened song of "What shall we do with our honey?" to the more cheerful strain of "How shall we supply the demand ?"

But it has been asked among us: why advance our pursuit and broaden our field, and thus increase the supply of our products, till there is no demand, when our markets shall be stagnated and we bankrupt ? This is the old sordid—selfish view which has never yet done honor either to the head or heart of him who advanced it. All nature and experience proclaim against him who by word or action declares that he has a good thing which he wishes to monopolize. All past history denounces his wisdom no less than his morality. How much more noble and attractive that spirit which thus reasons: My vocation brings me profit, pleasure and health; oh, that others might share with me its enjoyments. Nor is such a one less wise than generous. Let us study the effect of an increase in our production. A temporary decrease in price of honey would doubtless follow; but this decrease in price would stimulate demand, which in turn would lead to a just appreciation of its merits as a luxury, and with the newly-developed taste would come a demand which would raise the price far above its former status. Pres. Abbot tells me that in Switzerland honey is served at every meal. I have traveled a good many thousand miles in America, and so far as I remember, I was never yet offered honey at a hotel or restaurant. No, gentlemen, America does not consume a tithe of the honey which she might and should, and I believe that the reason is the slight production. This not only looks reasonable, but is in accordance with analogy through all the past, the world over.

But should not an increase in the production act as did Whitney's cotton gin in the price and consumption of the great staple of the South, as I verily believe it would; there are still other good and valid reasons why we should labor for this consumation.

1st. We shall thus add largely—may add immensely—to the productive capital of the country. There are townships in this county which sell annually from \$1,000 to \$3,000 worth of honey. Nor are these stocked to their utmost. Call it \$1,000 and multiply by 16, and we have \$16,000 as a mild estimate of the possibilities of our county; multiply this by 40—we certainly have that number of counties in the State that would stand peers to Ingham County—and we have \$640,000, an amount which might be realized were our resources fully developed. An amount which in two years would pay the cost of that magnificent structure, within stone-throw of this place, which is so rapidly nearing competition, and which is to be an ornament to this city and State. Multiply the above amount by 37, and the estimate is still low, and we have a grand total of more than \$23,500,000; which shows the possibilities of our country. This may sound big; yet when we remember that one man in Southern California shipped 13 car loads of honey East, last autumn, the sound is somewhat mellowed. How little reason have we to look with forboding spirit upon our country's future, notwithstanding financial panic and national debt, when such undeveloped resources lie thickly about us.

Again, bee-keeping affords most wholesome recreation, especially to any who love to look in upon the book of nature and study the marvelous pages she is ever waiting to present. To such there is a fascination about the apiary, which of itself is a rich reward for the time and labor expended. I doubt if there is any class of manual laborers who engage in their business and dwell upon it with the same fondness as bee-keepers. Were there no profits, I should be slow to part with those models of industry whose marvelous instincts and wondrous life-habits are ever ministering to my delight and astonishment. And like those who wear the red ribbons, we desire that others should share the pleasures which makes us glad. And so it is good to induce others to engage in what has been very properly styled the "poetry of rural pursuits."

Again, the profits of bee-keeping, as compared with the expenses and labor involved, offer very cogent reasons why we should work to advance its interests. Our granger friends think 10 per cent. usurious, and ask our law makers to legislate against such exorbitant rates. But what would they say to bee-keeping which offers from 100 to 300 per cent.? I am sure that the profits of intelligent bee-keeping are in and of themselves quite sufficient to warrant a wide increase in the business.

Again, the very health and life of our people demand that a considerable portion of their food should be sweets. Now our sugars and especially our commercial syrups are so adulterated that they are frequently poisonous and quite unsafe for food. So by increasing our production of honey we are doing an important sanitary work, supplying our people with a safe, wholesome and necessary article of food. To be sure extracted honey may be adulterated, but in this case it is easy to obtain the pure, which is not the case with our syrups. Is not he who increases the wholesome, nutritious food of a people as much of a philanthropist as he who increases the number of blades of grass? So you see, ladies and gentlemen, that we are a company of philanthropists.

Again, there is no business that serves so well as apiculture for an avocation. It offers additional funds to the poorly paid, out-door air to the clerk and office-hand, healthful exercise to the person of sedentary habits, and superb recreation to him whose life-work is of the dull, humdrum routine order, and can, with a little thought and management, be so planned as not to infringe upon the time demanded by the regular occupation. Indeed, we *are* philanthropists if we but succeed in calling the earnest attention of the above named classes to practical apiculture.

We shall, too, do great good in calling the attention of the young to apiculture, and thus lead many to its practice. The attention of our young people will thus be called to nature, and the bright and sprightly will hardly escape being won to its fascinating study. I need not to pronounce a panegyric upon such thought and study to such an audience as this. The tendency to refine the taste, elevate the desires and promote manhood, especially when exerted on the susceptible characters of youth are known and appreciated by you all. How better can we counteract the vicious tendencies of the street, or shield against the luring vice and damning influences of the saloon.

Lastly, we are bringing succor to those whom society has not been over ready to favor—our women. Widowed mothers, dependent girls, the weak and the feeble—all may find a blessing in the easy, pleasant, and profitable labors of the apiary. Some of the most successful apiarists of our State and country are ladies. Of these some were led to the pursuit by waning health, grasping at this as the last and only successful weapon against the grim monster. I believe, ladies and gentlemen, that it is a sacred priviledge, no less than a sacred duty which devolves upon us, to bring this to the attention of our sisters as another means of gaining food,rainment, health and pleasure. We shall have evidence from some of our lady friends—practical apiarists—at this meeting, of what they may do. Energy and persistence, coupled with thought and study, are sure to bring success. I sincerely hope and trust that at this and all future meetings of our Society, this feature may be held prominent, for in so doing we shall work a work that will be indeed twice blessed.

Before closing this address, I would offer a few suggestions for your consideration:

1st. Would it not be well to take some step towards procuring legislation, whereby our proceedings shall be incorporated in the Report of the State Board of Agriculture? The State disseminates agricultural matter and the proceedings of the Pomological society. Why not the valuable papers and discussions of this society? If this is considered wise, should we not become a co-operative body? Surely 9 years of vigorous activity would warrant this. I suggest a committee of three to act in these matters.

2d. Shall we not offer to the Secretary of the State Board of Agriculture the papers read here, and the discussions as recorded by the secretary; that he may, if he choose, incorporate the most valuable in his report?

3d. I would suggest the appointment of the following committees to report at our annual meeting:

First, on honey plants—quality, time to sow, time in blossom, how to plant, and amount of seed to a square rod.

Secondly, on the subject of house apiaries, shall we encourage their construction in our State?

Thirdly, on wintering. To gather statistics for the last six years. Not only as to loss, but as to the apiarist's opinion, and the method of preparation practised.

Fourthly, on the best method to stimulate and protect our honey markets.

Fifthly, I would propose that we adopt the principle of having our meeting migratory in future. Endeavoring to go where we are wanted, and where we will meet a warm reception.

Lastly I would call your attention to the necessity of some action in reference to the National Association. Letters will be read from the president and secretary, desiring our views and co-operation. I would suggest a committee of three to take the whole subject into consideration and report on the same in time for action before we adjourn.

A. J. COOK.

Shall Women keep Bees.

READ BEFORE THE MICH. CONVENTION.

Apiculture, like most out-door avocations, is almost monopolized by the stronger sex. In the days of our grandmothers this was a natural and necessary consequence of man's fitness and woman's want of fitness for the work. Picture a woman's helplessness in view of a swarm safely clustered in the top of a tall tree! Imagine her lighting the brimstone torch and pitilessly dooming to death her faithful little laborers—if you can! Need we wonder then that ere the introduction of movable frames, women did not aspire to be bee-keepers?

But, that so few women are interested in apiculture to-day is less easily explained. A friend, who has recently visited in New Hampshire, Vermont, New York, and Ohio—in country places, villages and cities—tells me that during her three month's absence, she met just one woman who knew something about bees. But, it may be asked: does apiculture offer any special inducements to women? May it not be that the work, no longer impossible, is still for them undesirable?

These questions cover the whole ground. With all due deference to the opinions of our brother bee-keepers, they are questions which can justly be answered only from a woman's standpoint. No intelligent bee-keeper is insensible to the attractions, other than pecuniary, which apiculture offers. Will he not grant that an intelligent woman may be equally sensitive with himself to the fascinations of a pursuit which is lifted far above most manual labor avocations by the mental stimulus it imparts. Moreover, her pleasure will be greatly enhanced by its appeal to that side of her nature which leads her to delight in any living creature which claims her care. I do not say that she will care for her pets more wisely, or that, as a study, she will find them more interesting than does her brother, but, do I claim too much when I say that her work,as compared with his, will be more a labor of love?

Still, with most women, as with most men, who engage in apiculture, the primary motive is profit. At the outset they have too little knowledge of the subject to be able to anticipate the pleasure which is in store for them. But no woman is insensible to the magnetic attraction of a little additional spending money. And I do not hesitate to say that to many women apiculture offers this inducement.

It may be a smaller portion than would satisfy our brothers—is very likely to be so, in fact. For we may as well frankly confess—to ourselves, at least—that our lack of physical strength is a disadvantage. Though the care of a few colonies may be only recreation, the woman who experiments in bee-culture somewhat extensively, will find that it means, at certain seasons, genuine hard work. In some cases she may be able to supplement her own powers by the friendly and gratuitous help of stronger arms; but it is needless to say that this is not exactly bee-keeping by *women*. A woman depending only upon her own resources, must not expect to do all that a man possessing thrice her physical strength might do in her place. Shall we conclude, therefore, that the work is for her undesirable? One of our most distinguished apiarists draws this conclusion, at least he objects to apiculture as an employment for women, on the ground that it is too laborious.

But does not the same objection apply, equally, to much of the work which custom and necessity require of the ordinary American housewife? I would gladly purchase exemption from in-door work on washing day, by two day's labor among the bees; and I find two hours at the ironing table more fatiguing than two hours of the severest toil the apiary can exact. I noticed last summer that Mary (our girl) seemed to esteem it a great privilege to be allowed to assist a little in the bee-yard, and that she always went back to her dish washing with a very audible sigh. I do not remember that I ever pitied myself or envied Mary—not even when my own work meant exposure to the mid-day sun, with the mercury near 90, while hers was only preparing the noon-day meal by the side of the hot kitchen stove.

But we have digressed. To return to the point in consideration, I repeat that apiculture offers to many women not only pleasure but profit. But I counsel no woman to engage in the pursuit, with a view to profit, who has not the vantage ground of a home. Possessing this, any woman may, with little risk, test her adaptation to the work, and increase as knowledge, courage and success may warrant. Granting her intelligence, she will make few expensive blunders, in the shape of patented hives, non-swarming attachments, etc., after the first year. Whether she purpose keeping a few or many colonies, she will find use for all the information she can in any way obtain. She will study our standard works on apiculture, and read discriminatingly our bee journals. But she will observe, think and decide for herself. She will, or should, make haste slowly. By the time she has served an apprenticeship of three seasons, she will be able to judge for herself, in view of her location, and the circumstances of her life, as to the prospect of receiving adequate compensation for her labor.

There are many cases—I think women know best how many there are—where a very small amount of profit may be a very great inducement. It may bridge over the difference between positive want and comparative comfort—piecing out the scanty income so that it may cover the necessary cost of living. Or, where the family purse is just sufficient for the common comforts of life, it may supply the wherewithal to gratify individual tastes and wishes. And whatever this may mean—books, music, tasteful household surroundings, gifts to friends or contributions to charities—be sure that it means, also, a more self-respecting spirit and a brighter and happier home.

The pursuit is as free to woman as to man. There is no prejudice to encounter; no loss of social standing as may be the case in some other employments. The lady bee-keeper may expect some manifestations of mild surprise on the part of her friends, but there will be no disapproval; and in time, if she be moderately successful, she may be amused to find that her neighbors are disposed to greatly exaggerate her modest gains, and are beginning to regard her as an exceptionally capable person.

There are women who should never attempt the care of more than a half dozen colonies; and so many as these, only after they have learned how to manage them. They have cares and duties which may not be put aside, and which they have no disposition to neglect. So far, and only so far, as the work is rest and refreshment may they safely be encouraged to venture. But such a one will, perhaps, enjoy more than her sister who is able to do more. She will have more time for study, for observation, for experiments; and as her familiarity with each colony will be closer, so will the interest—I might almost say the feeling of personal attachment—be stronger. And no more than against the flowers, which she cultivates for their own sake, should the value of her time be charged against her bees. Her profits, therefore, will be larger, proportionately, than if she attempted more.

I have admitted that bee-keeping is harder work for women than for men. But I believe that woman may do much toward adapting the work to their own requirements. They must think for themselves in this matter. Our brothers can hardly be expected to remove for us, or even to recognize as obstacles, what does not impede their own progress. For instance, your neighbor may use the largest of the four or five different frames in general use, and may be very successful therewith. Having only your interest in view, he may advise you to follow his example.

I earnestly counsel you, my sister, to do no such thing. I will not say that his frame is not absolutely the best; that is a disputed point. But I do say that it is not best for *you*. Choose the smallest frame in successful use, and justify yourself to yourself by comparing your ability to support heavy combs at arm's length with that of your neighbor. Justify yourself to your neighbor by quoting the opinions of practical and successful apiarists who endorse the smaller frame.

Since I have ventured thus far, I shall permit myself to indulge in a few more words of direct exhortation. It has been said that women ruin any trade or business into which they enter as competitors. Let us see to it, my sisters, that this be not said of us as bee-keepers. Whatever the market price of woman's labor may be, a pound of honey is worth all it will bring. Give away as much honey as you please, but don't undersell your brother bee-keepers! And by all means put your honey in as attractive shape as is possible. Do not let it be said of us that we are content with a lower standard of excellence than are our brothers!

Be prepared from the outset for difficulties and trials—you would meet them in any pursuit—be prepared to meet and overcome them, or, if not, to get around them in some womanly fashion, and go on. I am almost of the opinion that the whole secret of successful bee-keeping is perseverence. There is risk in the business. I would not wish you to ignore this fact. But an experience of 5 years leads me to believe that the risk is less than is generally supposed. After the first year make it a rule that your expenditures shall not exceed your receipts from surplus honey. Then, though in a single winter all your bees should perish, you will have hives, combs, and experience left, and need not consider yourself bankrupt. Take no risk you can avoid, put into your work your whole self—head, heart and hands—and demonstrate that women may keep bees successfully!

CYULA LINSWIK.

The Composition of Honey.

READ BEFORE THE MICH. CONVENTION.

Honey is one of the oldest things under the sun. At one time it was probably the only form of sugar known, and to-day is one of our most delicious articles of food. Does it not seem strange, then, that in this scientific age so little is known of its real composition or the changes it undergoes?

Honey is composed of grape and cane sugar, together with water, acid, and waxy matters. If honey be burned completely, a grayish colored ash remains, which amounts to about 15 per cent. of the original honey. In this ash I succeeded in obtaining reactions for silica, lime, and iron. There is also a small quantity of potash and phosphoric acid in honey. To estimate the quantity of these present, I took two portions of "cap" honey, free from pollen and wax, and burned them to a coal-like mass. In one, I extracted the potash with muriatic acid, and in the other, phosphoric acid with nitric acid, and estimated them in the usual manner. The following are the amounts obtained: Potash, .06 per cent.; phosphoric acid, .08 per cent. These substances would naturally be present in honey, as they are found in soils, and circulate in the juices of plants.

There are many things connected with honey, about which at the present time but little is known. The following are a few:

1. Has honey a definite composition? Is there any difference between the relative amount of sugar in honey made from buckwheat, basswood, clover, golden-rod, brown sugar, etc., or between the relative amounts of cane and grape sugar? Probably this question can only be answered by comparing the analysis of different kinds of honey.

2. Does the bee add anything to nectar in changing it into honey? On this point there is wide difference of opinion. But I know of no experiments having been tried to settle the matter. Perfectly pure honey, that has been dried completely, contains about 1 per cent. of nitrogen. Does the bee supply this nitrogenous matter? To decide this, I gathered some nectar from flowers in the Agricultural College greenhouse (from the azalia, rhododendron, and fuschia, but principally from the last), and carefully tested it for nitrogen. The result of my experiments is that nectar *does* contain traces of nitrogen. Therefore the fact that honey contains nitrogen does not prove that it was furnished by the bee. May not this question be decided by feeding bees upon pure white sugar, which contains no nitrogen, and afterwards examining the honey to see if any nitrogenous matter has been added to it?

3. After honey has stood for a certain length of time, a part of the grape sugar crystalizes out, and granulation or candying is the result. The cause of this change is not known. May not the conditions under which granulation occurs be determined by a series of experiments, by keeping honey at different temperatures, etc.?

Answers to these questions may not advance the market value of honey a particle, but we shall enjoy the satisfaction of knowing the truth of the whole matter.

R. F. KEDZIE.

Ag'l College, Lansing, Mich.

Shall Farmers keep Bees.

READ BEFORE THE MICH. ASSOCIATION.

It is much to be regretted that there is any necessity for the discussion of this question. It is unfortunate that there still remains any doubt upon a question of so much practical value to the agriculturists of this country. In its consideration I shall briefly endeavor to answer some of the reasons which are given by farmers why they do not keep bees.

The objections raised may be said to be these: First, a lack of time; second, fear of being stung; and, third, a lack of information in management.

First—As to a lack of time. A few pertinent questions to the average farmer developes the fact that the principal object sought in tilling the soil is gain. That this principle has a governing influence in determing the kind of crops raised and the system of management; that wheat is sown because the crop pays better than oats, that hops pay better than buckwheat; that the raising of cattle pays better than mules. The question is then a mere question of profit. And if $100 invested in bees will give a larger profit than the same amount invested in most branches of agriculture, then the first objection will be answered.

A farmer located in any average agricultural district in Michigan can purchase ten hives of bees (and if not in movable frame hives can transfer them to such), an extractor, honey knives, bee hat, and other necessary appliances at a total cost of not over $100. The time necessary to care for them each season would not exceed in the aggregate 20 days, at say $1.50 per day, being $30. Now what will he receive in return? Judging from my own experience and that of others who have practically applied the improvements in bee-culture made in the last 20 years, he will obtain not less than an average of 75 lbs. of surplus per hive, making 750 lbs., worth at least 12½c. per ℔., or $93.75; deducting the value of the labor, and he has $63.75 as a profit on the original investment of $100—an income of 63¾ per cent. Aside from this in most years there would be an increase in stocks which would offset any losses which might be suffered in wintering.

But is not the above estimate too high? Let us see. During the past year—and it was not above an average honey season in my section, linn or basswood yielding but little honey—from 29 hives, 20 of these being in box hives, I obtained 2,000 lbs. of honey and 25 new colonies. In one season previous, being desirous of ascertaining just what a number of colonies would produce if attended to carefully, and increase of colonies prevented; 17 hives averaged 125 lbs. of extracted honey each. I am satisfied the estimate is not too high, but the profits might be often larger in extra seasons. Of course my estimates are made on the supposition that the system of management is in conformity with the improved methods, and not on the old plan. I think I need not waste any time in presenting evidence that the profits above mentioned are larger than those secured in most branches of agriculture, and shall assume that the first objection is answered.

The second objection—the fear of being stung—is certainly a very *feeling* objection; and a warm reception by a score or more hybrids, without protection, would put a large majority of persons to flight, but fortunately such cases are rare, and with the use of the bee hat all danger is avoided. Occasionally there is a person who is so seriously affected by the virus of a bee that it would be imprudent for him to have anything to do with them; but we find only one such person in a thousand. Many persons care little for the sting of a bee, scarcely more than for the bite of a mosquito.

The fear of being stung is a small objection, and the pain and inconvenience is one of the unpleasant features of the business, and what business has not its disagreeable points? Crops fail, all kinds of stock are subject to disease and accident; pear trees are struck with the blight, the curculio destroys the plums, even the dog runs mad.

The third objection—a lack of knowlege of how to manage them—is the most serious one. The first two are merely used to avoid giving the true reason which would involve an acknowledgement of ignorance, which unfortunately, we oftimes hesitate to make. It is a fact not to be disguised that the successful keeping of bees requires careful study and prompt and timely care, as much perhaps as any branch of agriculture; but happily the bee-keepers of the U. S. have been a public-spirited and unselfish class, and through the medium of our bee journals, pamphlets, and books, have placed within easy reach of all people, a full and complete knowledge of the vast improvements made in the management of the apiary during the last ten years. And what more pleasant way can the farmer employ the long winter evenings than in making himself, his wife, sons and daughters, familiar with "Langstroth on the Honey Bee," "The Mysteries, by Quinby," and the equally valuable and still later information contained in the journals of to-day. In this manner the natural history of the bee and the theoretical management of the hive can be pleasantly obtained. And not only this, but the boys will be influenced to spend their earnings at home instead of at the village store or saloon; and another avenue of enjoyment and profit will be opened for our farmers and their sons and daughters.

Now, shall farmers keep bees? While the majority of them do not, and probably will not, yet I unhesitatingly reply that they should. It is a true saying that "The man who loves his bees, loves his home." And if our farmers could be induced to make themselves familiar with the wonders of the hive, I am certain that an enthusiasm would be aroused which would give us many skilled entomologists, a new interest would attach to the home circle, vice would be avoided, and a new element of profit would be introduced in agriculture.

A. B. Cheney.

Reciprocal Benefits of Bees and Plants.

READ BEFORE THE MICH. CONVENTION.

The mutial benefits of insects and plants are wonderful, varied, and manifold. With some plants, like Indian corn, pines, and spruces, the wind is the prominent agent in distributing the pollen. To atone for this imperfect method and the great waste likely to follow, nature secretes a profusion of the fertilizing dust. In the case of the trumpet-creeper and many tropical plants, the humming bird often transfers pollen from flower to flower. In some instances snails do a similar work; in others, water, as in the case of our ell-grass. In many cases flies, butterflies, moths, beetles and bugs are very efficient in the same good work. Hornets, wasps, bumble-bees, and especially honey-bees, are also frequent visitors to the flowers of plants for the purpose of collecting the pollen and nectar for themselves and for their young. Of all insects, the hive bees and their allies show the most intelligence in their behavior towards plants.

The flowers of our willows and poplars are of two kinds—male and female. The flowers are on distinct trees which are often separated by considerable distances. In some cases the pollen may be transferred by the wind, but in most cases it is undoubtedly carried by the bees which are very active while the flowers are fresh in early spring. The flowers of all our mellons, pumpkins, squashes, cucumbers and gourds are of two kinds on different portions of the same plant. The flowers are each furnished with a long or rather deep corolla in many cases, and the plants often lie flat on the ground where the leaves cover the flowers from the action of the wind. Bees and other insects are the necessary agents in crossing the flowers, and to them we are indebted as one of the links in the chain which affords all our gourd-like fruits. In nature there are many other examples of plants in which the two kinds of flowers are separate, as in oak, chestnut, beech, hazel, walnut, hickory, and many more. But how is it with most of our flowers which are perfect, *i. e.*, those having both stamens and pistils? I should have mentioned that notwithstanding the stamens and pistils are near each other on trees of the chestnut, and the pistils are evidently abundantly dusted with pollen, yet no fruit sets unless two trees are somewhere near each other, that the pollen of one tree may get upon the pistils of the other. In such cases the flowers of the two trees fertilize each other. The same is said to be true with one stalk of corn in a distant field. I intend to try this more fully the coming season, and in a similar manner test many other plants singly, to see if they will produce seed, and whether the quantity and quality are good. Most of our cultivated strawberries have perfect flowers, and may be self-fertilized, at least to a great extent; but the Hovey, green prolific, and some others, have poor or abortive stamens. That they may be fruitful, it is the practice to mix the plants with the Wilson or some other plants bearing perfect flowers. The bees carry the pollen and take the honey.

But how is it with the majority of perfect flowers which have good stamens and good pistils in the same flower? In many of these the pollen is applied to the stigma by insects, and such flowers are rendered more fruitful by these insects than they would be if the flowers were left to themselves. This has been proven by experiment to be the case in many instances, though some flowers are no more likely to seed with the help of insects than without. Very many of our perfect flowers present or ripen the anthers a day or so before the stamens are ready. Such are the lobelias, campanulas—most all the compositæ which includes about one-ninth of all the flowering plants of this part of the country. The last order includes the sunflower, aster, golden-rod, dandelion, etc. Flowers of spilobrium or willow, herb, and clerodendron, thrust the stamens out straight when ripe, while the miniature stigma is curled back and unopened. On the following day, after the pollen is gone, the stigma straightens out and opens. In the case ot clerodendron, the stamens curl back when the style straightens. The stigmas are the brides too late for the marriage of nearest relatives, for the pollen or bridegrooms have been carried off by the insect priests, and may be wedded to others not related or not very nearly related. All plants producing the ripe anthers before the stigmas are *protandrous*. Many others are *protogenous*. They present or ripen the stigmas before the anthers shed pollen. Of such we have the rib-grass or *plantago*, forget-me-not, scropularia.

[Full explanations are useless without illustrations. The Professor showed many of these by figures on the blackboard and on charts.—Ed.]

We may almost say that flowers which are *protandrous* or *protogenous* are the rule and not the exception. Honey bees are the most prominent, but not generally the only insects which transfer the pollen. In the primrose of our greenhouses, Houstonia and partridge-berry and others, all the styles of the flowers on one plant, and those propagated from this by cuttings are of a certain length. They are long on some plants and short on others. On plants with long styles showing the stigma at the throat of the corolla, the stamens are inserted on the corolla below, near, or towards the base of the flower, while flowers with short styles have stamens at the throat of the corolla. Some experiments show that the plants are most productive of good seeds when stigmas of the long styles are fertilized by anthers occupying a similar position on flowers of other plants. And so of the short stigmas. The above plants are often called *dimorphous lytherum solicaria*, loose strips, and others perhaps are *timorphous*, *i. e.*, there are stamens of three different lengths, and styles—of three different lengths, long, medium and short. If a flower has a medium style it has long and short stamens; if it has a short style, it has medium and long stamens. What does this mean? Why, that bees (I have seen them at work thus) carry the pollen to the styles of different lengths by different parts of their bodies which have touched the anthers on stamens of a corresponding length which were on other flowers of other plants.

There is an endless number of special contrivances differing in plan and details in each flower or genus of flowers. Those interested are referred to Gray's "How Plants Behave," for details and illustrations of kalmia, milkweeds, orchids, iris, etc. Prof. Riley observed a small moth especially adapted to fertilizing a yucca. She laid an egg and then sipped honey, and so repeated the operation. The plant reared her young insects. She took the honey and transferred the pollen enabling the plant to set seeds. Insect and plant were useless each without the other. This is sometimes true of the striped cucumber-beetle. She eats the young plants, and, later, the pollen and honey, but she helps the plants to seed.

The flowers of *martynia*, trumpet creeper, *mimulus catalpa*, bladderwort, and others have broad flat stigmas which curl apart. When touched by a bee's head in passing in, the stigmas close in a few seconds, and cover the surface which is sensitive to pollen. While taking the honey, the bees are dusted with pollen which is just in the right place to be left on the stigma when entering the next flower. In these flowers, self-fertilization is impossible unless in rare and exceptional cases. For particulars see *American Journal of Science* for Oct., 1876, in article on the subject by the author of this lecture. Flowers of Dutchman's-pipe, some arums, and lady's-slippers, entrap and hold as prisoners different kinds of small insects which enter them. They are not prisons like Libby or Andersonville in miniature, for they treat their prisoners well, with good shelter and an abundance of food and drink of the best that nature affords. The flowers of our common flax are absolutely sterile when close fertilized by the pollen which is ready in abundance, and often falls upon the stigma of the same flower. Bees cause the flowers to get seeds by crossing with the proper pollen. Our crop of flax seed, then, is benefitted in yield, and in some cases entirely dependent on the aid of the little busy bee. Our common garden beans are self-fertilizing to a certain extent, but the crop is more than doubled by the aid of bees.

Most or all plants are better for a cross. This is not always so apparent at first, as it is after several generations of plants raised from self-fertilized flowers. In such cases, a cross adds increased vigor and fruitfulness. Many, very many flowers you see are as plainly intended for cross fertilization as the beak and talons of the eagle are intended for catching, holding and tearing prey. Not honey bees, but little insects nearly akin, produce the galls on oak. The oak kindly receives the egg, swells up a soft succulent house and gives the young worm an abundance of food. An insect lays an egg in the stem of a golden-rod, or in the tip of a young stem of willow. A brush in one case, a cone in the other is produced to nourish the young worm and feed and shelter it to maturity. Whether these insects repay these plants for their kind reception I have not been able to find out. Paid or not paid, they have food enough and to spare for these interesting little creatures. With small bladders, the bladderwort is busy catching microscopic animals, and retaining them till dead, and then slowly transferring the nourishing juices to the rest of the plant. Here is cruelty even among humble plants. The queer common pitcher plant of our swamps is supplied on the inside with spines pointing downwards. This is the case with numerous others on the continent. Some of them prepare a honeyed secretion which grows more abundant until the lid or open mouth of the pitcher is reached. Insects are enticed, lured on, like a tippler in the dram shop, to the open mouth of destruction. Curiously-constructed lids make the mouth dark, and help to keep the insect from escaping. Most of them cannot walk up the inside of the pitcher. They are drowned by the liquid and devoured by the carnivorous plant.

A few insects, among them a moth, is provided with sharp stiff spines on her legs which act like stilts to enable her to walk up and down among the stiff spines in the pitcher. When a boy, we used to make a box trap for squirrels and rats. To deceive them and make them waste their strength, in busily gnawing where it would not injure the trap, we bored small holes through the sides, and nailed over a piece of tin with a hole through it to let in the light. In the pitcher plant of the Southern swamps are thin translucent spots towards which the insects are attracted instead of the open mouth above which is shaded by the overshowing lid. This is one of nature's cunning traps. The *martynia* plant and others catch and suck to death with their sticky glands innumerable small insects. The venus fly trap of Carolina, everyone knows about, and very likely they have heard of the several kinds of sun-dews which catch little flies with their glands.

Honey is secreted in different parts, or by different organs of the flower. Sepals, petals, stamens, pistils, and disk, each in different flowers is found to secrete nectar. By this I mean that one kind of flower secretes honey with its petals, another kind by sepals and so on. Petals attract bees. Saunders, of Canada, cut off the petals of raspberries and by so doing made it difficult or impossible for the bees to find the honey. Individual bees have been observed to behave differently about flowers, in some respects, from a majority of bees. Some are excentric. They have their own peculiarities. Nageli put artificial flowers to branches, and used essential oil on some, and on others he used no oil. The odor attracted them to the flowers containing it. Aristotle, 2.000 years ago saw that hive bees worked continously on flowers of the same species. They even do so when the flowers are not all colored alike, as in some plants in our flower gardens. By this means they economize time. They get the hang of it. They learn how better to make more rapid motions, and to make every motion count. The same as is true of people who become expert in certain parts of any trade after much practice in often repeating the same operation. In some cases, large numbers of honey bees soon learn to glean after bumble bees, where the latter have made holes into the nectar. I have seen orioles pinching the tube of the Missouri currant or yellow currant, to get the little honey from each flower. This left a small hole which the bees were not slow to find, and frequently use as long as the flower remained fresh.

We have thus seen some of the diverse contrivances by which plants are made to secure cross fertilization. The list might be almost indefinitely extended, and yet find something different in nearly all of them. Flowers shut up, go to sleep, bend over in all manner of ways to prevent themselves from wind and weather, to retain the essential parts in a fresh condition until the time when the proper insects are likely to be about. If they are intended for the visits of moths, they open when the moths are likely to fly, and do not waste their sweetness in daylight. If, like the dandelion, they are dependent to any degree upon bees and other day insects, there is no need of their remaining wide awake all night. They had better close up as they do, and keep for the best part of several days. So you see, the honey is placed in the flowers as wages to pay the bees for serving the plants. The colors and odors are advertisements to call the attention of insects to the rich supplies of food in store for them. It may be said that the honey is there for the bees, but *primarily* it is there for the good of the plant, *secondarily* for the good of the insect. As has been said: "The flowers surpass in an incomparable degree, the contrivances and adaptations which the most fertile imagination of the most imaginative man could suggest with unlimited time at his disposal." You who like the honey bee and are so familiar with its habits and worth, will think no less of it on account of my showing its value to plants.

Had good old Dr. Watts lived in our day, and become familiar with those parts of science, he would very likely have written the familiar stanza in this way:

How doth the little busy bee,
Improve each shining hour,
By carrying pollen day by day
To fertilize each flower.

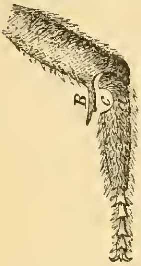
W. J. Beal.

Agricultural College, Mich.

For the American Bee Journal.

That Joint in the Leg of a Bee.

Dear Editor:—That peculiar joint in the leg of the bee has so worked itself into my brain, that it must be disposed of. It has been like a half-learned song which one can neither sing nor get out of mind. Thinking that perhaps others among the many lovers of bees might be interested and pleased, I send a cut which you may use if you choose.



The artist has not made a very good foot, but the joint is quite correct. As the foot of the bee is moved toward the one on the opposite side of the body, the joint would close, holding tightly anything which might be placed between *b* and *c*. By taking the head off a live bee, and putting the leg under a microscope, before life is extinct, the muscles may be seen to contract and relax, thus showing perfectly the working of the joint and little grasping apparatus connected with it.

On the inside of the first joint of the second leg there is also a thorn-like projection, which has the appearance of being intended to aid in holding anything being carried by the bee. Both this and the little spur fitting over the circular opening in the forward leg, seem to be of a horny substance—like the framework of the wing—and with a high magnifying power may be seen some beautiful fluting, inside the circular opening.

Is it not by means of these that they hold so strongly to each other when clustered for comb-building, or in swarming? Does it not show, how much that we have always wondered at might be easily accomplished? I have tried, when they were carrying out dead bees, to see just how they were held, but the little things were too quick.

I can find no description in our bee publications, of anything of the kind, except the pollen basket on the posterior leg. If but a mite is added to what is already known of our little workers, I shall be more than content.
M.

Medina, O., April 16, 1877.

[M. is invited to continue her investigations and report in the Journal. We think she has done much better than if she had "learned" her "song," and kept it all to herself. We are glad that our lady friends are so earnest in their investigations. Several communications from them appear in this number, and more are waiting for our next issue.—Ed.]

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For the American Bee Journal.

A Letter from Tennessee.

Mr. W. J. Andrews sends us the following letter with a request to publish it:

Chattenooga, Tenn., Feb. 28, 1877.

Most of the bee-keepers here are amateurs. I know of no real apiarist in this section, but nearly every farmer has a few colonies in common box-hives or gums. There is occasionally an American hive among them, but they know very little about the management of bees in movable combs. They trust to luck and are superstitious in regard to selling bees. The get a little honey for home use, but very little goes to market, and that is in a very bad (mussy) condition. The natives will not invest one cent in movable combs or glass boxes. If they are people of any means, they are above bee-keeping, or let the negroes attend to the bees.

I believe Upper Sequaschie Valley is a splendid place for bee-culture as a business. The forage is splendid, especially lireodendron trees and black locust. The only trouble is to get to market.

Last year I made three closed-end frame Quinby hives; frames 1½x12x18; each hive with six frames; removable sides and ends; with honey-board and 6 boxes, 4½x6x6, glass sides. The next thing was to get bees. So I sent one hive out in the country to get a swarm put into it. The party informed me that he put a very large swarm into it about June 15. He promised to send it to me just as soon as it got cold enough to move them. He delayed so long that about Feb. 15th I went after them. I found that he had left the ventilator open at the bottom, and one glass box was broken, letting a draft of cold air through the hive all winter, killing fully one-half the bees and compelling the others to occupy the other half of the hive. They were also starving. I smoked them a little, and in half an hour afterwards closed the hive and put it in my wagon. I brought them home and fed them at once, and they are now working very industriously every warm day. They appear to be hybrids, as they have yellow spots on each hip. The party having had an Italian queen in his yard.

Now I will describe the apiary. There were about 25 stands—of all kinds. 2 American, 4 with glass fronts and slides to cover glass, others with glass in top, with a drawer; the rest box hives. The American hives were the only movable combs in the lot. They had all been sold the day before at public sale, the lot brought from 50c. to $2.50 each (3 stands at $2.50). They were in a very bad condition and were starved and neglected. Chickens roosted on them every night. Hogs rooted them over frequently. The glass fronts were all open and the sun shining on the combs. Several were smashed and the combs exposed to the air. They informed me that my swarm was the only one that issued in 1876! Also that they sold over $400 worth of honey in one year.

I will let you know in the future how I succeed. I intend to divide my colony and make 3 of it this summer, even if I have to feed.
S. C. Dodge.

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For the American Bee Journal.

Western Illinois B. K. Society.

Met at Monmouth, Warren Co., Ill., on Tuesday, April 10th, 1877. President, Wm. M. Kellogg; Secretary, Hardin Haines; Treasurer, T. G. McGaw; Vice-Presidents, Jas. A. Simpson and Dr. W. H. Derr; Corresponding Sec'y, Hardin Haines.

After reading the minutes, the Sec'y read the report of the committee on constitution,—which was adopted as were also the by-laws.

The following became active members: T. G. McGaw, Monmouth; Mr. and Mrs. Levi Hollingsworth, Monmouth; A. T. Jarvis, Oquawka; Wm. M. Kellogg, Oneida; Hardin Haines, Vermont; Judge John Porter, Monmouth; G. C. Axtell, Roseville; A. E. Cole, Roseville; Dr. N. H. Derr, Ruthsburg, Ill.; E. C. Crane, Burlington, Iowa, and several others.

The following was reported by the committee on questions for debate:

1. Artificial vs. natural swarming.
2. Queen rearing.
3. Best honey resources.

4. Italian vs. black bees.
5. Does extracting pay?
6. Best mode to secure the most amount of honey.

SWARMING.—It was considered best to make artificial swarms by building up from nucleus stocks, etc. One objection was, the bees sometimes built too much drone comb.

QUEEN REARING.—H. Haines and others thought it best to rear queens in full colonies, by making a frame to contain from 12 to 16 queen cages; putting in queen cells after hatching. It is only necessary then to introduce them into swarms, etc.

HONEY PLANTS.—Mr. Simpson—White clover, buckwheat, basswood, golden-rod, and bergamott are useful and good for honey. French and alsike clover was decided to be a failure.

ITALIAN BEES.—Italian bees make more honey than blacks.

There was a difference of opinion in regard to extracting.

On the last question, several decided that the best way to get the most honey was to have none but Italian bees, and small brood nest; for box honey, give plenty of room, etc.

A report from Wm. J. Andrews was expected, but was forgotten.

A fine essay from Rev. A. Salisbury, on Wintering Bees, was then read. The meeting adjourned to meet at Oquauka, on Oct. 2 and 3, 1877.

HARDIN HAINES, Sec.,
WM. KELLOGG, Pres.

For the American Bee Journal.

Foreign Notes.

GLEANED BY FRANK BENTON.

It is estimated that there are 90,000 to 100,000 hives of bees in Sweden.

Schwarmeinbringungsgeraethe are the affairs that the Germans use to catch swarms. It must be that they never lose any; for wouldn't the mere utterance of this musical word suddenly arrest the most determined fugitive swarm? Suppose some of our American bee-keepers who allow natural swarming, try it this season? Just murmur the word in tenderest accents and note its effect on the circling swarm.

FORMING NEW COLONIES.

A French apiarist, M. Cayette, says in *L'Apiculteur:* "I believe it is difficult to determine long beforehand exactly the best time for forming new colonies if one wishes at the same time to secure the largest and best yield of honey. Good apiarists in our locality have natural swarms during 2, 3, and 4 weeks. The best are not always those that issued first. If the yield of honey only becomes abundant in the second or third week, the swarms that issue during this favorable time are the heaviest. The first swarms must devote themselves to the rearing of brood, and are thus occupied during the harvest; the second swarms, on the other hand, having little or no brood, but with a strong population which can be sent into the field, are in the best condition to lay up ample stores. If the bee-keeper were satisfied that the loss of harvest sustained through swarms issuing or made at inopportune times, is made up by the excellent stocks which these swarms make, he would have no cause for complaint, but there is great reason to doubt this.

"My efforts are now directed towards obtaining strong colonies in the spring, in order to make my swarms, at will, as nearly as possible at the exact time which appears to me the most favorable for obtaining the maximum yield of honey. It is necessary to know when this time arrives or else be content with a smaller return."

DEAD BEES IN THE COMBS.

"No one can clear dead bees from combs more quickly or skillfully than mice. If combs filled with dead bees are set for 2 or 3 days in a still place so that mice can get at both sides, they will be found completely cleaned out. This work, which would be very tedious and tiresome for the bee-keeper, and which he could scarcely perform without serious injury to the combs, is very neatly done by the mice; and they only knaw a cell here and there—where the body of a bee does not come out readily, or where they find a little pollen which they nibble." —*T. Sliwka, in der Schlesische Imker.*

The apiculturists of France seem to be very much interested in having a good apiarian display at the next Exposition, which is to be held in Paris in 1878. After stating that colonies of bees could be exhibited, one of the editors of *Le Rucher* (Bordeaux) remarks: "We are certain that the apiculturists of Paris will do themselves the honor of exhibiting their colonies, and will carry high the flag of Progress, which could not be confided to better hands."

POINTS FOR BEGINNERS.

1. Procure only healthy and populous colonies, even though they cost more than unhealthy or weak ones.

2. In general, buy in the spring, after the colonies have been successfully wintered, and get some well-informed apiarist to assist you in making selections, or at least purchase from some bee-culturist with whom you are acquainted.

3. Clean thoroughly the hives in which you place swarms.

4. Allow no empty combs which you wish to use in hives to lie about in the open air, in the bee-house, or any place where moths can get to them; for such combs become genuine brood-nests for wax-moths, the larvæ of which destroy the combs and fill the hives with their webs, so that, if precaution is not taken the existence of the stock is endangered. — *Bienenvater aus Boehmen.*

THE BEE.—That within so small a body should be contained apparatus for conveying the "virtuous sweets," which it collects into one kind of nourishment for itself, another for the common brood, a third for the royal, glue for its carpentry, poison for its enemies, honey for its master, within a probosis almost as long as the body itself, microscopic in its several parts, telescopic in its action, with a sting so infinitely sharp that, were it magnified by the same glass which makes a needle's point seem a quarter of an inch, it would yet itself be invisible, and this too, a hollow tube—that all these varied operations and contrivances should be enclosed within half an inch of length and two grains of matter, while, in the same "small room," the "large heart" of at least thirty distinct insects is contained, is surely food for vast thought.—*My Scrap Book.*

American Bee Journal.

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Specimen copies, canvassing outfit, Posters, and Illustrated Price List sent free upon application.

We send the JOURNAL until an order for discontinuance is received at this office, and arrearages are all paid.

We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Remittances to be sent at our risk must be by Post-office Order, Registered Letter, Draft or Express (charges prepaid). Make Post-office Orders and Drafts payable to Thomas G. Newman.

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and is a very valuable work.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be tested.

* * *

Rev. D. C. Millett, of Holmesburg, Pa., has received a diploma and medal for the "Deborah Bee Hive," for the following reasons:

As an economical hive in sections, with movable combs and facilities for inspection. It is easily made, is inexpensive, and well adapted by the protection it affords for northern climates.

JOHN COLEMAN, *Judge*,
FRANCIS A. WALKER, *Chief of Bureau*,
A. T. GOSHORN, *Director General*,
J. R. HAWLEY, *President*.

A full description of this hive was prepared for this issue but is crowded out. It will appear in our next.

* * *

BINGHAM SMOKER.—I have just received my Smoker, ordered last winter. Isn't it a gem? Tell A. I. Root that it is not as much like the Quinby as the Quinby is like an old Dzierzon Smoker that a German has near Kalamazoo. If Mr. Bingham sells this smoker at the standard price of $1.50 or $1.60 by mail, which he tells me he will, he is surely a great benefactor to bee keepers. *Somebody* owes me an "improved" smoker, as the one from Mr. Root did not last four weeks.

Bees about here are dead, dead, dead—say three-fourths, on an average. The Italians are away ahead.

It is no more than fair to say that the 25 stocks of Italians which I purchased of Mr. Oatman, of Dundee, Ill., last May, are in prime order, except two or three that I left queenless in the fall. I went hunting ducks and snipe, you see. JAMES HEDDON.

Dowagiac, Mich., April 17, 1877.

* * *

Honey Markets.

CHICAGO.—Choice white comb honey, 15@18c. Extracted, choice white, 8@9c.

CINCINNATI.—Quotations by C. F. Muth. Comb honey, in small boxes, 12½@20c. Extracted, 1 ℔. jars, in shipping order, per doz., $3; per gross, $30.00. 2 ℔. jars, per doz., $6.00; per gross, $60.00.

ST. LOUIS.—Quotations by G. W. Smith. Comb, 18@20c. Extracted, 8@10c. Strained, 8@9c.

SAN FRANCISCO.—Quotations by Stearns & Smith. White, in boxes and frames, 10@15c. Strained honey in good demand at 9@10c.; comb, 11@12½c.; beeswax, 25@26c. Extra fine grades of honey are firmer. Markets well supplied with low grades.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, JUNE, 1877. NO. 6.

Editor's Table.

☞ Old combs, from colonies that have become extinct, should be cleansed and fumigated with sulphur occasionally, to prevent the moths from destroying them.

☞ Luke Hitchcock, of Cook County, Ill., informs us that he recently had a good queen leave her hive and go to another—and of course was killed as an intruder. Have any of our readers had similar experience?

☞ The honey obtained from apple blossoms is scarcely merchantable, but the beauty of it is, the bees will use it out of the boxes to raise young bees, and so have the combs in boxes already prepared for the white clover harvest.—*Gleanings in Bee-Culture.*

☞ Among the many things that Herbert A. Burch has done since he has figured as secretary of the Michigan Bee-Keepers' Association, none perhaps were more appropriate or agreeable than that which he did on the 23d of April, assisted by the Rev. E. A. Paddock—Miss Adelia E. Shoemaker is the "happy bride." The A. B. J. extends its congratulations.

☞ A wise-acre scribbler for the Chicago *Times*, lately sent the following item on its rounds among the provincial press of the Northwest:

> The little busy bee does not need to "improve each shining hour" as it did when the poet sung a pleasant ditty about the industry of the sweet stinger. Honey is now manufactured from corn syrup and glycerine, and placed in artificial combs made from paraffine by a patented machine.

Manufactured honey is as scarce as hen's teeth; finding no sale for it, that *stuff* soon "gave up the ghost." Hence it is all moonshine about its being "placed in artificial combs, made from paraffine by a patented machine." It is a gross libel on comb foundations.

☞ Friend Murphy has forwarded for our inspection his Centennial award for diploma and medal for his extractor. It is in "due form," and, as we stated in our last issue, is duly recorded in the official list of awards on page 25.

☞ There is a species of parasitic larva called *volucella bombylous*, which live in the nests of bumble bees braving the fury of their stings and devouring their young. These are a different species from those that sometimes infest the honey bee and its home.

☞ California is parched with a severe drouth, the like of which has not occurred for 25 years. The prospects for honey there is discouraging. In one or two sections there has been some rain, and the prominent bee-keepers on the Pacific Coast have been engaged in moving their bees to more favorable locations. Los Angeles has had some late showers, but they came too late to help the leading honey plants, still they may help the later feed.

☞ Beginners should now be careful to keep all colonies well supplied with vigorous and prolific queens. Colonies may be divided as much as required to prevent them from attempting to swarm. If the queen has no room to deposit eggs, use the extractor. If comb honey is desired, adjust boxes or frames for them to work in. If you wish to Italianize, this is the month to do it in. White clover honey should be kept separate from all other kinds.

☞ The Los Angeles (Cal.) *Herald* says that Mr. John Mountain, of Santa Monica, has been capturing bees and honey in the rocks of the Santa Monica range of mountains, where they seem to exist in great numbers, and many of them very rich in choice honey. The *Herald* adds: "We are informed that Messrs. Smith & Carlyle, of Santa Monica, last season took sixty swarms from the mountains along their canon."

The Festive and Greedy 'Hoppers.

Several letters received during the past month have reverted the 'hopper—and the prospects for its utter extermination in what is known as the "grasshopper country." The following facts will be of interest to those bee-keepers who live in Kansas, Nebraska, and Western Iowa.

It will be remembered that Professors Riley and Thomas, of the Entomological Commission, were to visit Kansas and Nebraska to inquire into the subject. They have just issued their Report, showing that the troublesome pest is at an end.

"The egg of this insect was laid in the fall ot 1876, in what may be called the Missouri region, consisting of Western Iowa, Northwestern Missouri, portions of Kansas, Nebraska, Minnesota, and Dakota.

"This egg comes to perfection only in the sandy. arid regions of the far West. The rich, moist soil of the Missouri Valley, and the snows and rains, wrought havoc amongst the eggs during the winter and spring, and the young insects which hatched out during April have been rapidly destroyed by the elements, by parasites and by birds, and these influences, with the work of the farmers themselves, have at this date brought to destruction nine-tenths of the young 'hoppers.

"The outlook in Southern Nebraska may be stated thus: West of a line drawn from Crete, the eggs are all hatched and nearly all the young 'hoppers annihilated. Between Crete and the Missouri river, they are nearly all hatched out and annihilated, and as fast as they appear they are being destroyed by the various influences brought to bear upon them.

"The prospect for crops is as good as it possibly can be. and the people are jubilant over the outlook for good crops, good prices, and the fact that the grasshopper scare is now practically at an end. The condition of Southern Nebraska was never better; there is a larger area of ground planted than ever before. The increase in stock has been enormous, and business generally is brisk.

To our Southern Subscribers.—We have made arrangements with friend W. J. Andrews, of Columbia, Tenn., to conduct a "Southern Department" in the A. B. J., which he will make interesting to all the bee-keepers of the "Sunny South." In order to accommodate this department such extra pages will be added to the Journal, as circumstances may require. We shall commence the arrangement in the next number. Our Southern friends will please "take due notice, and govern themselves accordingly."

☞ Either of the two new extractors, noticed elsewhere in this issue, can be obtained at this office. Stephenson's is sold at $14, and White's at $15.

Something New.

We were invited to make a visit to Mr. Hugh Templeton's, in this city, to see "something new." Of course, we went and found what it was. Mr. Weiss, "the inventor of rolls for making artificial comb foundation," has added another to his many inventions.

In the beginning, when the great architect of the universe, assisted by the Eloheim, founded the human race by making the first man, "the morning stars sang together, and all the angels of God shouted for joy." In humble imitation of that august event, Mr. Weiss has made a man, a dog, and a bee-hive—in the latter its thousands of inhabitants are expected to "hum their merry song," while they gather the sweets which cause the sons of men to "shout for joy."

The design is life-size, of a man with a hive of bees on his back being attacked in front by a large dog. It is a handsome design for a lawn. The entrance to the hive is through the man's mouth.

Mr. Hugh Templeton has had it built expressly for his lawn by Mr. Weiss. It is made of plaster of Paris over a profusely-wired frame and is substantial and neat.

Sending Bees by Mail.

Until recently bees have been sent by mail, and it has been both a *cheap* and safe means of conveyance. The P. M. General having decided that bees are unmailable, and some post-masters having refused to forward them, we wrote to the P. M. General, asking him to review the matter, and reverse his decision; at the same time we stated that the manner in which they were put up prevented their doing injury to the mails. But it appears to be of no use. His decision is like "the law of the Medes and Persians—which changeth not," as will be seen from the following letter:

Post Office Department,
Washington, D. C., May 19, 1877.

Thos. G. Newman, Esq., Chicago, Ill.,

Sir:—The Postmaster General has referred your letter of the 17th instant to this office with instructions to say, in reply, that the ruling excludes bees from the mails was made under the administration of one of his predecessors, and seems to be in accordance with the spirit of the postal law and with the provisions of the postal regulations, from the fact that if so sent they would be liable to deface other mail matter transmitted therewith, notwithstanding their incasement according to the manner proposed by you. He declines, therefore, to revoke the said ruling.

James H. Marr,
Acting First Asst. P. M. Gen'l.

A New Discovery.

Friend W. H. Ware, of Bayou Goula, La., about a month ago, sent us the New Orleans papers containing notices of a new discovery in bee-keeping by Alex. McConnell, of that city, and asks if there is not some mistake about it. The *State Register* says:

> "Mr. McConnell has often been mentioned in these columns as one of the most practical bee-keepers in the South. He is a cultured, scholarly gentleman, who finds a real pleasure in bee-keeping, and who has devoted many years of study and careful experiment in the management of bees. A visit to his apiary is a rare treat, as he always has something new in the way of experiment to communicate. On our recent visit he showed us the very nicest honey-comb made by the bees of materials which he prepared and furnished them with. He assures us that there is no trouble in getting bees to use this material, and we are satisfied that the combs cannot be distinguished from those made in the ordinary way. We consider this the most important discovery in bee-keeping, since the invention of the movable-comb frame, and that it will greatly exceed the invention of Langstroth in its effect to increase the honey production. Mr. McConnell informs us that he will shortly take measures to introduce this valuable discovery to the bee-keepers of the world. Louisiana is the best honey-producing State in the Union, and it is to her honor that one of her sons will thus greatly assist in causing the land to flow with honey, if not with milk."

As friend C. O. Perrine is down there with 500 colonies of bees, we wonder if Mr. McConnell has not been using artificial comb foundation extensively, and astonishes the natives with it?

The New Orleans *Picayune* is very particular to specify the advantages claimed, as though a patent right was to be the outcome of this new discovery. It says:

> The inventor claims for his discovery:
>
> 1. That it will enable colonies to construct their combs 2 months earlier in the spring, and to make honey out of a crop of spring flowers that passes away before bees can make comb by the old process.
>
> 2. It will enable bees to gather four times as much honey as they usually gather in the spring months when new comb has to be made. In Southern Louisiana bees in strong colonies usually collect a little over 12 gallons of honey yearly, in movable combs emptied when full by centrifugals.
>
> Mr. McConnell drew from a working hive a sheet of new comb with young bees in it, and live Italian bees crawling over it, that had been made by the new process in 22 days. They started work on March 12th, and the comb and young bees were exhibited on April 3d.

True, the feat is astonishing! Ordinarily, worker bees are hatched out in 21 days—but Mr. McConnell's, we are informed by the *Picayune*, "had been MADE by the new process in 22 days." It is, indeed, wonderful!! Astonishing, for Louisiana—that bees should have started to work "on March 12th and the comb and young bees were exhibited on April 3d"!! Prodigious!!

The *Picayune* grows eloquent, and adds that "hundreds of barrels of honey are yearly shipped from Louisiana"—but "this new discovery bids fair to quadruple the best yield, or secure 50 gallons yearly for every strong colony."

Either the *Picayune* has been humbugged; Mr. McC. has "playing roots" on it, or there is a great mistake somewhere. Which is it? Will Dr. Rush, C. O. Perrine, and other bee-men in Louisiana give us some light on this subject?

STEVENSON'S EXTRACTOR.—Since our last issue, friend Muth has sent one of these extractors to this office. It is manufactured by C. F. Muth, Cincinnati, though he calls it by the name of his friend who first suggested its general character. It is very substantial and neat, and as it will hold about 70 ℔s. of honey below the revolving frame holder, it is not necessary to remove it every time a little extracting is done; and it can remain there till it is ready for bottling. The frame holder is smaller at the bottom than at the top, and when revolving, the honey is thrown downward instead of horizontally against the stationary can. This not only prevents the usual raising and spattering of honey on the person operating it, but also admits of extracting from any piece of comb without its being in a frame. It has also two neat tin covers. The whole top and revolving frame-holder can be taken out in a moment, for cleansing, or any other purpose. It has a "honey gate," and is a very desirable extractor.

☞ In reference to the decision of the Postmaster General, friend W. J. Andrews writes: "Our postmaster notified us yesterday that he had received instructions from the Postmaster General not to allow any bees sent in the mails. This cuts us off in the dollar queen business. If this ruling is not revoked we shall decline all future orders for dollar queens, and rear tested queens altogether to be shipped by express."

NEW BOOKS.—We have received from the publishers, Dick & Fitzgerald, 18 Ann St., New York, two excellent works, viz.: "Dick's Recitations and Readings," and the "Vegetable Garden." Each is 30 cents, in paper covers, or 50 cents, bound in cloth, and they are well worth the money.

THE WAR IN EUROPE.—The war cloud that has been gathering over Europe for years has now commenced to break. Actual hostilities have begun and what the end may be no living soul can tell. At present it seems likely that the whole of Europe will be involved.

"It is an ill wind that blows no one any good," is a trite remark. And though we do not wish to have war with its terrible desolations and suffering simply for the benefit it may be to us, still as it must come it may be well to see what effect it will have upon our country. The *Factory and Farm* very truthfully remarks that "no portion of this country will be benefited by a foreign war as will the great West and Northwest. The demand from abroad will be for our wheat, corn, flour, meal, etc., and at prices that will make farmers happy and give large returns for their labor. Wheat and corn have already gone up amazingly. There will be a call for every bushel that can be spared for export. There is no danger of flooding the markets by over production, and, should the war continue, the acreage must be largely increased. New farms will be opened, the price of lands materially advanced, and general good times for farmers be experienced."

◆

CHINESE MUSTARD AS A HONEY PLANT.—Perhaps one of the very best honey-producing plants is tall Chinese mustard. It remains in blossom a very long time, seems to yield honey continuously, is equally vigorous to resist drought, or wet, and flourishes in all soils. It may be sowed any time from May 1st to middle of June—the earlier the better. It will seed itself—its greatest drawback—yet it is far less troublesome as a weed than common mustard. It should be planted in drills a foot apart, for ease of cultivation. An ounce will plant a space one rod by four.

We can only fill a few orders for this seed. Those who desire it should send early. Price, per ounce, 20c.; quarter pound, 75c., postpaid.

◆

WHITE'S EXTRACTOR.—Friend White has sent one of his extractors to our office for exhibition. It was advertised in our last issue, and consists of two cans, one stationary, 12 in. deep and 20 in. in diameter with a faucet for drawing off the honey. The second can sits in the first, in which it revolves, throwing out the honey through perforated tin on the sides and bottom. This perforation makes an excellent strainer for the honey, as well as a receptacle for holding it during the process of the necessary evaporation before bottling. The frame is made of 2x6 in. plank, mortised into the feet, a cross piece over the top supporting the usual gearing. The inside can revolving in the outer one, makes considerable noise, and it does not run as easily as others without such an arrangement.

◆

THAT FIRST CURVED KNIFE.—In reference to the item on page 158 of our last issue, friend Murphy writes:

> "Friend Chapman is a little mistaken in his statement in regard to the curved-pointed honey knife; he took his A B C lessons from me in the honey extracting business. I do not know whether I or Winder got up the first curved-pointed honey knife, but I got the first curved knife at the heel, in 1866 or 1867. It was accidental, having one with very little 'temper' in, and getting it bent to a curve; it worked so much better that I had them made that way, until I tried the curved point, and found that in uneven comb I sometimes wanted both curves, to work to the best advantage, and recommended friend C. to have his made that way."

On another page friend Chapman corrects the statement we made in the May number. A typographical error made us give the wrong year of the first one he manufactured. "Honor to whom honor is due." If friends Murphy or Winder made the first one—that laurel they shall wear. The A. B. J. seeks to do no one injustice—the exact truth in detail, is all it asks, or will be satisfied with.

◆

CLEAN OUT THE HIVES.—The past winter has been a long and cold one, and much *debris* has accumulated in the hives. In some, it may be damp and mouldy, and the affluvia from it would not be of the best kind. Lift such combs into a clean hive, pruning off all old queen cells and scraping off all offensive matter. Scrub the old hive with a brush and hot suds, and rinse it out with boiling water. A clean hive will delight your pets and they will work so much the better for it. Shake off the young bees in front of the new hive and there will be no loss in that direction.

◆

☞ East or a point north or south of east is perhaps the *best* situation for hives.—Ranging them under a south wall is the worst situation possible, the heat sometimes is so great that work will be entirely suspended for some of the most valuable hours of the day. They are also exposed to all the storms of wind and rain which prevail from that quarter.

◆

☞ We sell Catnip seed for 30 cents per ounce. This is a good time to sow it.

Notes and Queries.

"Is alsike clover a good forage plant for honey?" J. M. GOOD.

On moist ground it does well, but cannot be depended upon in a drouth. Honey from it is good, both in quality and quantity.—ED.]

Fort Atkinson, Wis., May 1, 1877.—"Will you please tell me in the next number of the JOURNAL, how to keep comb until time to use it?" L. M. ROBERTS.

[Keep combs in a close box. In our college apiary we have a box 3 ft. high and 5 or 6 ft. long; this will hold three rows of Gallup frames. The box is just as wide as the top bar is long; hence by nailing ½ in. strips 11½, 23, and 34½ in. respectively from bottom, we have support for frames, which of course must be turned a little to put them on lower strips. The boards are matched, and set in paint, and the covers hinged on and fastened in front by three hooks, that draw it down very close. This keeps even the wee ants out. As the box is only a foot wide it takes little room in any building.—A. J. COOK.]

Kane Co., Ill., May 7, 1877.—"Last fall I had 6 colonies. I took an old box and put them in. In Feb. they were all dead but 2. This spring, when it was time to set them out, they were all dead. We got 6 more from J. Oatman & Co., which are in splendid condition, breeding very fast. Will you please tell me what you mean by foul brood; also how to tell when it is among the bees? How many colonies can we make out of those 6 this season?" F. PERRY.

[For a description of foul brood and its cure see an article by friend Muth on page 196 of this issue. You can double them with safety, perhaps more; but you must be careful not to allow colonies to become weak from an over-desire for increase.—ED]

Pleasant Unity, Pa., May 3, 1877.—"I am not a novice in bee-keeping, but almost a novice in using the extractor, taking care of honey, etc. I intend to use a double hive—one hive on top of another. Please inform me, through the JOURNAL, what condition the honey should be in before extracting, *i.e.*, capped or not capped? 2.—What kind of a vessel it should be kept in. 3.—Would a syrup barrel do? 4.—Where should it be kept? 5.—Will honey be likely to sour when extracted?" J. H. KELLY.

[If honey is reasonably thick, and to be used at once, extract before capping takes place, as it saves much time. We have done this for years and no fault was found with honey. If honey is thick there is no use to wait for capping, even if honey is to be kept.

2. Keep in any good, strong, close barrel, after waxing the same. To wax the barrel, put a little hot, melted beeswax in to the same and roll the barrel vigorously.

3. Syrup barrel will do well.

4. Keep in dry place. If in glass covers, in a dry, dark place.

5. No, not if it is thick when thrown out. —A. J. COOK.]

"Do you know of a good cure for bee stings?" JOHN JOSLYN.

[Yes; to extract the sting press the hollow of your watch key, or any small tube, over the sting, and then bathe the place with aqua-ammonia, or moisten salaratus and apply to it. The poison is acid, and an alkali will neutralize it. Soft soap is often used with success.—ED.]

St. Paul, Minn., April 24, 1877.—"I have just started an apiary with 2 colonies of hybrids.

How may I know that bees returning to the hive are ladened with honey?

Do the hives require any upward ventilation now?

Have mine covered with honey board and carpet on the board. No ventilation through honey-board. Is it right?

Is 3 feet space between the hives too little?

Can honey accumulate in the hive from willows and maples?

One of my queens is 3 years old; ought I to introduce a young one this season?

My bees are gathering pollen nicely. QUIZ.

[If honey is being put into combs, of course the bees are gathering. By catching a bee by the wings, as he comes to the hive, and pressing the thorax, the honey will issue from the proboscis, if the sucking stomach is full.

2. No, keep perfectly tight above till nights are warm, and even then if you shade the bees or keep them packed in chaff.

3. Better leave off your board and just use carpet, or quilt. If you use the board your way is good.

4. I prefer more; some do not.

5. Yes, and very rapidly too, if the weather is warm and dry. We have done better on willow and soft maple than on fruit blossom this spring.

6. Not if she is doing well. Never supercede a good prolific queen.—A. J. COOK.]

"Thinking it not desirable to permit after-swarms—if it can be avoided; please tell me how to do so." C. R. MENZ.

[The best way to prevent them is to introduce a young fertile queen.—ED.]

Correspondence.

For the American Bee Journal.

Chickens Eating Bees.

As to chickens eating bees, as referred to in the April number, I always keep my bees and chickens close together. Have never seen any chickens catching live bees. Have seen them eat the dead bees at the entrance when there were none flying, but as soon as the bees commenced to fly, they quit. I have also noticed that when an old hen got too close to the entrance, when the bees were flying, they gave her a hint to leave, which she invariably took.

I had a turkey that interfered with a hive, and you should have seen it trying to scratch the back of its head with both feet and run away, all at the same time. I caught it and took 9 stings out of its head and neck; it never went much after bees since. My 44 stocks of bees have wintered well, packed in straw.

ED. WELLINGTON.

Riverton, Iowa, April 9, 1877.

San Buenaventura, Cal., April 30, 1877.—"I have frequently seen chickens eat bees, but they always selected the drones. We think we will be fortunate if we save our bees from starving in this section of California, without getting any swarms or surplus honey." R. WILKIN.

For the American Bee Journal.

Improvement of the Italian Bee.

I fully agree with Geo. Thompson that the Italian bee can be improved, as to size, color, and docility, by taking the same pains that a poultry breeder takes. He breeds for size, color, and other good qualities. So do others in breeding their stock, such as horses, cattle, sheep, hogs, etc. I will admit that it takes closer and finer work to breed bees to a certain standard, than it does other stock, because their fertilization is not so easily controlled. This difficulty can be overcome, but it is not every one that is calculated or has the faculty to succeed in breeding any kind of stock, or even to keep the standard good that they commenced with. Others will take any kind of stock and bring it up to a much higher standard, than they commenced with.

In order to breed bees so as to improve them, the breeder must not only have a taste for bees, and like to fuss with and handle them, but must have an eye to business, believing that like produces like; he will by practice succeed on that line. My experience is that queens producing the lightest-colored drones, have workers that are 2 and 3 striped; by breeding from such queens they will soon run to black bees. The best queen I ever had, was one of six that I purchased of S. B. Parsons, Flushing, L. I., in 1866. He imported a full colony from Italy; it was carried over the Alps on men's shoulders. I suppose this colony was selected for its bright golden color. One of the 6 queens produced workers of a light ash color; they looked almost white in the sun, as they basked in front of the hive. The drones appeared almost black as they mingled with the light bees. On examining these drones, I found they were of a glossy black, reddish color. This queen was light, like her bees. She produced all light queens, without exception. I have this same strain of bees yet.

There are very nice bees in Italy, but impure ones also. I have received queens, said to be imported, that I never bred a single queen from. I was satisfied they were impure. They were dark in color, producing workers that could not be handled with comfort without hat and gloves. To import bees from some districts in Italy would take a long and careful breeding, to bring them up to a good standard. The importer should take as much pains in selecting queens, as stock breeders do in their stock. Then it would save a great deal of vexatious breeding to bring them up to the desired standard of purity.

MISCELLANEOUS HINTS.

Chickens do not eat bees, but will go for the drones.

Toads eat bees. Hives should be set up from the ground, out of their reach.

The best way to expel cockroaches and ants from hives, is to use plenty of salt in and about all the crevices and around the super-boxes. Moths will not deposit eggs where there is salt, and salt does not injure the bees; they are fond of it.

Bennington, O. A. BENEDICT.

RECIPE FOR THE BITE OF A MAD DOG.—Franklin Dyer, a highly respectable and intelligent farmer of Galena, Md., gives the following as a sure cure for the bite of a mad dog. As will be seen, he has tested it with the most gratifying results. Elecampane is a plant well known, and is found in many of our gardens. Immediately after being bitten, take one ounce of the root of elecampane (the green is best, but the dry will do), it may be found in any drug store; slice or bruise; put in a pint of fresh milk; boil down to a half pint; strain; when cold drink it, fasting at least 6 hours afterwards. Next morning repeat the dose prepared as the last, and this will be sufficient. It is recommended that after each dose nothing be eaten for at least 6 hours. I have a son that was bitten by a mad dog 18 years since, and four other children in the neighborhood were also bitten. They took the above dose and are alive and well to this day. I have known a number of others who were bitten and applied the same remedy. The root contains a principle which being taken up by the blood in its circulation counteracts or neutralizes the deadly effects of the poison. I feel so much confidence in this simple remedy, that I am willing you should give my name in connection with this statement. R. MILLER.

Compton, Lee Co., Ill.

At a recent meeting of the *Societe Centrale d'Apiculture et d'Insectologie*, M. Trouillet said that the accusation of the bee as the injurer of fruits was not justifiable; he certified that the bee does not attack sound fruit; that it only sucks injured fruit or such as have been punctured by the sparrow or the earwig or that the rain has caused to crack open.

Honey as an Article of Food.

READ BEFORE THE MICH. CONVENTION.

The small boy of forty years ago had one source of enjoyment not vouchsafed to the youth of the present time. I refer to the general muster, when the unterrified militia (nicknamed the ragged barefoots) were called out to serve their country. This was a gala day for the boy of the time. For weeks and months he had saved and begged till he had from one to four shillings in his pocket to spend on this day of days. Various were the enticements to induce him to part with his hard earned pennies. There was the man with the barrel of sweet cider at two cents a glass. There was the man with a market basket of ginger-bread—and such ginger-bread—its like never was seen, either before or since, the color of gold and fit for the table of a king. The ginger-bread man always got a portion of the boys' money. But the crowning attraction of the day for the boy of the time was the man with the upturned bee-hive, from which he cut dripping slices of virgin honey, yet from fear that it would become "loathsome from its own deliciousness" and make the boys sick, he always sold with it a slice of bread. He never failed to take the last reluctant penny. Alas, the memory of those days is all that is left of them. But the taste for sweet things has been faithfully transmitted from that to the present generation.

The amount of sugar, syrups, honey, and other sweet things consumed by the people of the world is something astonishing, and to the people of Great Britain and the United States, must be accorded the distinction of using more than any others on the face of the globe. "The Anglo-Saxon race consume annually 41.4 ℔s. per head, the Latin race 12.34 ℔s. per head, the Teutonic race 7.3 ℔s. per head, while the poor of Russia, Poland, Turkey, and Greece consume only 3.3 ℔s. per head."—Letherby on food, page 50. So it will be seen that we are eminently a sugar-consuming people. Rich and poor alike share in this vast consumption, so that to tax or adulterate the sugars, syrups, or honeys, is to strike a blow at one of the chief comforts which the poor man can afford for his table.

The above figures are for sugar alone. I regret that I have no statistics at hand to show the consumption of honey alone, per head, but from the census of 1870 I gather that in the United States there was raised of honey nearly 15,000,000 ℔s. This a falling off of over 8,500,000 ℔s. from the census of 1860. By looking at the census for the different States it would seem that this falling off is the result in the Southern States, of the war, and in the Northern States of the bee disease—dysentery. But from the information furnished by our bee papers I am satisfied that the production of honey is increasing with rapid strides. Take for instance the State of California, the census report gives for 1870, 147 tons, while lately we have reports of shipments, this last autumn by single individuals of over 100 tons, and I have reason to believe that a similar increase has been had in the rest of the States. And this increased production is going to continue. Heretofore the production of honey was confined to comparatively few persons, but now this industry is attracting the attention of men of education and practical skill—men who are prompt to utilize the discoveries that have been made within the last 50 years. The supply of honey is practically inexhaustible, croakers to the contrary, notwithstanding, and I will venture the prophecy that the next census will show astonishing results in this direction. So that all of you who have a longing for honey on your buckwheat cakes, need have no fear that you cannot continue to indulge in this healthful food as years roll on.

In treating of honey as an article of food it is hardly possible to disassociate it with sugar. The chemical composition of each is so near alike that I am compelled to treat of them, so far as food is concerned as one and the same substance.

Dr. Dalton, who is high authority as a physiologist, in treating of the substances which compose the human body, indicates three classes of proximate principles. Those of the first class are of an inorganic nature, such as water, salt, potash, lime, phosphates, etc. Those of the second class are starch, sugar, and oil, and those of the third class he terms the albuminoid substances.

In this treatise I am concerned only as it regards sugar. Our author says of sugar, that "it includes a considerable number of substances which differ in certain minor details," and he classes the sugars under the following six varieties, viz.: Vegetable sugars—cane sugar, grape sugar, sugar of starch. Animal sugars—milk sugar, liver sugar, sugar of honey. While not feeling qualified to dispute so high an authority, I cannot but think he is mistaken in classing sugar of honey as among the animal sugars. Honey in its original state is certainly a vegetable production, but that it undergoes change in the honey sac of the bee I have reason to doubt. I know that the distinguished entomologist, Prof. Riley, of Missouri, holds to the opinion that it does, but this position has been vigorously attacked by some of our most scientific bee-keepers and I think the weight of the argument is against this classification. But this point is immaterial in relation to my present purpose.

In speaking of food, under which our author above quoted, includes "all those substances, solid and liquid, necessary to sustain the process of nutrition," he treats of starch and sugars in the same group, "since starch is always converted into sugar in the process of digestion." He further says that "there is a natural desire in the humam species for both sacharine and oleaginous food. It has," he writes, "been supposed that sacharine matters could not be absolutely necessary as food. Since it has been found by the experiments of Bernard, that in carnivorous animals kept exclusively on a diet of flesh, sugar is still found in the liver, as well as in the mammary gland. The above conclusion does not apply to the human species practically. The carnivorous animals have no desire for vegetable food, while in the human species, there is a natural craving for it which is almost universal. It may be dispensed with for a few days, but not with impunity for any great length of time." And further he lays down this comprehensive rule: "The instinctive desire of animals for certain substances is the surest indication that they are in reality required for the nutritive process."

Having now established by the highest physiological authority, the necessity of the use of sugar as an article of food, let me speak more particularly of that form of sugar termed honey. The use of honey as food is coeval with the creation of man. Frequent allusions to it are made in the most ancient writings, sacred and profane. "Milk and honey" were considered by the ancients as synonomous with the highest prosperity. In the song of Moses there occurs this striking sentense: "He made him ride in the high places of the earth that he might eat the increase of his fields, and he made him suck *honey* out of the rock and oil out of the flinty rock." Also the riddle of Samson: "Out of the eater came forth meat and out of the strong came forth sweetness." Aristotle wrote about bees 330 years before Christ, and Virgil, some 30 years before the Christian era, devoted a whole book to the same subject. I quote a few of his polished lines:

"The gifts of Heaven my following song pursues
Aerial honey and ambrosial dews
Their arms, their arts, their manners I disclose
And how they war, and whence the people rose."

No modern writer with all the aids of modern discoveries has described the nature of bees more truly than has Virgil in these interesting lines:

"The bees have common cities of their own
And common sons; Beneath the one law they live.
All is the state's: the state provides for all.
Some o'er the public magazines preside
And some are sent new forage to provide.
Some nurse the future matron of the state.
All with united force combine to drive
The lazy drones from the laborious hives.
Some employed at home, abide within the gate
To fortify the combs, to build the walls
To prop the ruins, lest the fabric falls.
But late at night, with weary pinions come,
The lab'ring youth, and heavy laden, home."

We have some interesting and curious information in regard to bee-culture among the ancients. One writer says bee-culture among the Romans was regarded as an important source of income. Domestic economy then required a large quantity of honey not only for the making of confectionery, cakes, artificial wines, but also for the celebration of sacrifices offered to the several divinities that watched over the gardens, the orchards, and the harvest. For such a consumption the Italian productiou of honey was not sufficient, and it is not too rash to advance, that among the reasons which induced the Romans to invade Gaul, the quality of the honey that the forests of that country furnished, can be taken into account.

The French have had for bees and their products, the same relish as the Romans. The Salic law contains a whole chapter of regulations on hives and their inhabitants. "At the death of a member of the family they placed on each hive a black cloth as a sign of mourning. When passing before hives, it was expressly forbidden to use any rough words or to swear for fear of seeing the bees leave their hives forever." I apprehend that in these modern times, should success in bee-keeping depend upon the observance of this rule, this science would be numbered among the lost arts. But I cannot linger in this inviting field suffice it to say that honey was everywhere regarded by the ancients as a precious article of food and no pains were spared to increase its production.

Honey has always been considered a healthful article of food and until the culture of sugar began, was extensively used, but as the production of sugar increased its use has greatly fallen off. The chemical composition of honey varies greatly, according to the locality in which it is gathered and the kind of flowers which produce it. I have found that the different writers in giving the analysis of honey, vary greatly in regard to its chemical constituents. Gen. Adair, who has been regarded as high authority in bee-culture, claims that honey is only sugar, nothing more, nothing less, but other authorities call this hyper-philosophical, and claim that honey is a distinct article from sugar. We have the following analysis of honey: "Glucose, or sugar of starch, 45.00; uncrystalizable sugar, or gluten, 45.10; water, 7.70; waxy matter, 1.15; nitrogen and acid matter, 2.10." It will be seen by this that honey consists of over 90 parts in 100 of sugar, crystalizable and uncrystalizable. It now seems probable that the nectar as it exists in the flowers undergoes some change in the honey sac of the bee, but how much is yet undetermined. There seems to be no doubt that formic acid is thus added to the honey. But it is unnecessary to pursue this analysis further. We all know by actual use what honey is for all practical purposes. Some localities are celebrated for their honey. Hybla, a mountain in Sicily, and Hymetus, a mountain in Attica, were in ancient times celebrated for their honey. Certain localities in these modern times are noted for the fine qualities of their honey. In this country, California produces excellent honey, but I doubt if there can any better honey be found than is raised in Michigan from white clover and the American linden or basswood. One thing is certain, no honey brings more in the Chicago market or is easier to sell than Michigan honey from the linden. It is as staple an article as wheat. Honey is sometimes poisonous. The honey of Trebizond produces the effect of drunkenness, and is due to a certain honey plant or tree native to that vicinity. But I have known bees in this country to visit poisonous flowers.

The wax of honey is said by some to be unwholesome. Bee-keepers who extract most of their honey enlarge on this point particularly. But the small amount of wax in fine linden or clover honey I do not think unhealthy. There is certainly a most delicious flavor in fine comb honey, which is lost by extracting. Solomon seemed to understand this when he used the expression, "Sweeter than honey *and the honey-comb.*"

As to the healthfulness of honey as a daily food, I think there can be no doubt, so I forbear from remarking further on this point. Honey is often adulterated. Flour, starch, chalk, plaster of Paris, and pipe-clay have been used, but I do not think these substances are now used to any great extent. Dishonest dealers have found a much better material in glucose, and this is the substance now most generally used. Glucose is made in France by the following process: 32 barrels of water are placed in a wooden vat and 80 lbs. of sulphuric acid are added to the water and the whole is heated to boiling point by steam conveyed through the vat by pipes of lead. To this mixture of water and acid 200 lbs. of starch, dissolved in 23 gallons of water, are gradually added, and the boiling is continued till the whole is converted into a sweet syrup. The steam is now shut off and chalk is added to neutralize the acid, but if too little is used free sulphuric acid will be left in the contents of vat. Most of the lime settles to the bottom of the vat. The clear liquid is now drawn off and evaporated by steam, till the syrup is of the proper density.

Iron steam pipes are probably used in this country, as most of the glucose we see here is tinctured with copperas, caused by the dissolving of the iron by the sulphuric acid. The difficulty with this plan of making sweets is that the sulphuric acid and the lime and the copperas cannot be entirely removed. Even if the chemical tests for those substances fail to detect them, they are still combined with the sugar of the syrup. Says Dr. Kedzie: "Sugar will combine with lime, oxide of lead, oxide of iron, and sulphuric acid, and form a compound acid, which comports itself very differently from simple sulphuric acid. Glucose," he adds, "will also thus combine with these substances." Now "sulphuric acid is a powerful corrosive poison, acting instantly on the throat and stomach, causing intense agony and death," and you all know what lime and copperas are. Now the testimony of the best chemical authority is, that with the utmost skill of the manufacturers, glucose must still contain traces of these poisons. Glucose can be made to look almost exactly like honey. It mixes freely with it and takes the flavor of the honey readily, so it is difficult to detect its presence by taste or smell or appearance.

The best test of the purity of honey yet known, and some writers say it is infallible, is this: perfectly pure honey will sooner or later granulate or become candied. So I would say to honey consumers, beware of honey put up in fancy jars, which is in a liquid state, ten chances to one it is adulterated with glucose. All this refers to extracted honey, or honey separated from the honey-comb. But if you would be perfectly safe then get honey in the comb with its royal cells yet unbroken. But you may say that comb honey is dear, and as we can find no other with the grocers that fills the bill as to purity, and as you must have something for your buckwheat cakes, you buy the sugar syrups. Are you any better off? Do you suppose that if one set of scamps found out that glucose was a first-class article for the adulteration of honey, another set would not discover that it was equally useful to doctor sugar syrups? If you do, I can tell you that you are very much mistaken. I have here before you several samples of these syrups, which I have tested with the proper chemicals, as given by the best chemists, and the label on each sample gives the true results. I invite you to examine them. And write on this subject, and as closely pertaining to it, I will add a few words in regard to the adulteration of sugar. I have not given this the same investigation that I have the adulteration of honey and syrups, so I do not speak so positively. But I will give the process of refining as I find it in the new American Encyclopedia. After reading this I think you will agree with me that sugar may at best be regarded with suspision.

Refining sugar as formerly practiced was to add to the boiling sugar bullocks' blood, which coagulated and rose to the top, bringing the impurities with it, and all was skimmed off. This cleansed syrup was then strained through closely-woven bags and filtered through deep filters of animal charcoal, after which it was reduced by boiling. This produced pure refined sugar. The new way is to add to the syrup a solution of basic acetate of lead for precipitating the coloring and foreign matters. The excess of lead is rendered insoluble by the use of sulphurous acid gas, and the excess of this gas is removed by boiling. By this process the use of strainers and the expensive animal charcoal are dispensed with. "But," adds the writer, "the treatment of the juice, with a poisonous salt of lead, should only be intrusted to persons of chemical skill." Just so! The fact is that almost all we eat or drink or wear is adulterated. The light which modern chemistry has thrown upon the constituents of foods and drinks is taken advantage of by dishonest persons to their own advantage, and as a consequence the cheating and impoverishing of consumers. I think it is to be regretted that we have no sufficient law in this country to punish such adulteration of human food. The poor man is especially at the mercy of those dishonest men. He understands little if anything of chemistry, and if he did he could not bear the expense of the proper chemical tests to detect those impurities.

In European countries, especially France, they have a different system. In that country "if any one is convicted of having mixed other substances with an article sold as pure, even when those substances are unobnoxious, the product is destroyed and the adulterator heavily fined." Says the same authority: "I have seen 40 barrels of wine poured into the street gutter because the dealer had mixed with his wine apple juice, sugar, and tartaric acid, to increase its quantity; yet this wine was very good—good for the health also. But the fault was, it was sold as pure wine, and the dealer was cheating the public and damaging the wine producers."

The only remedy is for consumers to learn these dishonest tricks and demand for their hard-earned dollars the full equivalent in perfect goods. If we cannot do this let us return to first principles, and either make our own sugar and raise our own honey or buy of those at home, whom we know have the pure article for sale. The grand old maples of our forest yield their annual supply of precious sweets, and the busy bee as she goes and comes in ceaseless toil ever sings the words:

"Not to myself alone
The heavy-laden bee doth murmuring hum,
Not to myself alone, from flower to flower
I rove the woods, the garden, and the bower,
And to the hive at evening weary come;
For man, for man, the precious food to pile
with busy care,
Content if he repays my ceaseless toil with
scanty share."

J. TOMLINSON.

☞ Several articles prepared for this issue are crowded out for want of room.

Desirable Combs—How Secured.

READ BEFORE THE MICH. CONVENTION.

Mr. President, Ladies and Gentlemen: Though this subject is not one of my choice, I will give my views upon it, formed by nine years of experience and observation. I shall speak of methods practical, rather than possible.

For desirable combs for brooding purposes, I know of none so good as bee's honey-comb. I know of no better way to get them built than to put honey bees into a cavity or empty box in times of a yield of nectar. Why smile at the statement, because it is old? If novices go on in their wild career of artificial bee-keeping, the above method will soon be patentable. If you want all worker comb in the brood chamber, that want will probably not be gratified. We can take two hives that are apart of each kind of comb, and by assorting them get all the drone comb in one while we will have the other complete with worker comb; but on a later examination you will find the corners and perhaps larger parts of some of these worker combs changed to drone-sized cells. We cannot overthrow nature; but we can hedge it about sometimes to our advantage. Different colonies act differently in regard to this matter, of fine and coarse cell building, and perhaps we will do well to try to bring all colonies up to the natural maximum point of worker-comb building. This I find I can do to so great an extent by the proper construction of the hive, that any farther manipulation to gain this point is impracticable and time unwisely spent.

Further, I doubt very much if it would be wise to keep a single colony entirely devoid of drone comb. I think I have noticed that stocks which contained a fair amount of drones proved more profitable than either those that had next to none or a superabundance, other things being equal.

There are three or four important points in the construction of the hive, all bearing largely upon this point, but too complicated to describe on paper, unless in a special paper on hives. None are patented, however.

In regard to store combs in the boxes, if the bees are guided by the right kind of wooden guides, properly spaced, and a honey-board be used, we will find mostly cheap, choice store combs full of honey and free from brood and bee-bread. That is if we find anything in the boxes.

Before closing I wish to mention a subject that seems to be somewhat neglected, and one which seems to me to claim the immediate attention of advanced apiarists. I refer to the patent hive peddling that is going on in different parts of the State. I cannot but look upon the vending of patents on hives of to-day, as a decidedly wrong practice. Let our association discuss this point, and let it be the duty of the members as a whole, and as individuals at home, to post bee owners in their localities in regard to this matter. I have given away hours of time, dollars worth of stamps, and more or less of wood and nails, in this cause, and am willing to continue doing so. I intend to put an article on this subject into our county paper, if the editor is willing to give it space. How many of you will do likewise? JAMES HEDDON.

A Woman's Experience.

READ BEFORE THE MICH. ASSOCIATION.

Some years ago there seemed little else for the average woman to do, in the way of self-support, aside from music, teaching, sewing, and household employments, and the few who ventured beyond these were considered at least "strong-minded," very likely "masculine." The question of woman's rights is no longer prominently before the public, but whatever one's views may be, or may have been upon the subject, its agitation has undoubtedly done good, leading women to consider her own abilities, and awakening her to the realization that whatever other rights were denied her, there were fields of remunerative labor open to her, hitherto unrecognized. These, considering the barriers of custom, she has not been slow to occupy, but there are still others given up to the monoply of men, to which she is well adapted, and which in the progress of woman's or human rights must inevitably be shared with her.

Bee-keeping, for women, is of comparatively recent date, and, judging from the interest manifested, is attracting a degree of attention hitherto unknown. "Will it pay?" is a practical question often asked of me, but one to which I can reply with no more assurance than if it pertained to the keeping of a boarding-house. So much depends upon knowledge of the business and management that in either case it may or may not be a success. But I can say that having tried both, I give bee-keeping the preference, as more profitable, healthful, independent and enjoyable.

Like other occupations, it has its drawbacks. The apiarist may lose his bees in various ways, or the flowers may. fail in their contribution of honey; but the liabilities are no greater than that the farmer may fail of success through drought or flood, or the boarding-house keeper through unpaid boarders' bills or wastefulness of servants. Perseverance and general good management will in time overcome such occasional obstacles. Evidently we can point to no sure way of success unless it be to that of the Frenchman who said "the way to be successful is to succeed." The

PROFITS OF THE APIARY

seem to me as sure as those of most employments for women, and much greater. I judge so from observation, and from my own experience, which I have been requested to give.

Three years ago last fall I bought two colonies of Italian bees of Prof. Cook, and under his instructions wintered them out-of-doors successtully. The year following they increased to five large colonies, and my account for the first year is as follows:

Spring of 1874—Dr.	
To 2 colonies of Italian bees @ $12	$ 24.00
Interest on the same @ 10 ₰ cent	2.40
3 hives complete @ $2.50	7.50
Total	$ 33.90
Fall of 1874—Cr.	
By 5 colonies of bees @ $10	$ 50.00
215 lbs. comb honey @ 25c	53.75
185 lbs. extracted honey @ 18c	33.30
Total Cr.	$137.05
Total Dr.	33.90
Balance of credit	$103.15

The second winter the five colonies were kept on their summer stands and came out in good order. These were increased to 17 colonies, and the account for the second year reads thus:

Spring of 1875—Dr.

To 5 colonies of bees @ $10	$ 50.00
Interest on the same	5.00
8 hives	20.00
Sugar for spring feed	2.00
Extractor	8.00
Quinby smoker	1.50
Total	$ 86.50

Fall of 1875—Cr.

By 420 lbs. comb honey @ 25c	$105.00
504 lbs. extracted honey @ 18c	90.72
17 colonies of bees @ $10	170.00
80 empty combs @ 25c. each	20.00
Total Cr	$385.72
Total Dr	86.50
Balance in favor of Cr	$299.22

The third winter all were kept in a room in the house cellar, specially prepared for them, but not in the best condition when they were put in. It was plastered all over, but too late in the season to become perfectly dry. As a consequence there were some mouldy combs, and the colonies were all somewhat depleted, though none were wholly lost. In the early spring, through negligence, one colony starved. I sold another, and by uniting others reduced the number from 17 to 13. With these I began last summer, my third year. Not wishing to increase the number because of inability to properly care for them, I kept them back as much as possible, making very large colonies. In the fall they numbered 18, and my account for the third year is as follows:

Spring of 1876—Dr.

To 13 colonies of bees @ $10 each	$130.00
Interest on the same	13.00
7 hives @ $2	14.00
Honey for feed	4.00
Loss in wintering—3 colonies	30.00
Use of 1 acre of land for white clover	10.00
Total	$201.00

Fall of 1876—Cr.

By 903 lbs extracted honey @ 16c	$144.48
550 lbs comb honey @ 22c	121.00
125 empty combs @ 25c	31.25
1 colony sold	8.00
18 colonies on hand @ $8	144.08
Total Cr	$448.00
Total Dr	201.00
Balance in favor of Cr	$247.73

I began bee-keeping with very little knowledge of bees, so little that when the first swarm issued and were circling in the air, I thought, as I remarked, that they were "out on a frolic." But when they clustered on the limb of a tree, preparatory to flight, I comprehended that

THEY "MEANT BUSINESS."

I am asked how I can endure working out-of-doors in the heat of summer. I reply that I find it more endurable than working over a cook-stove in-doors, and much pleasanter and more conducive to health. By beginning in the early spring when the weather was cool and the work light, I became gradually accustomed to out-door labor, and by Midsummer found myself as well able to endure the heat of the sun as my husband, who has nearly all his life been accustomed to it. Previously, to attend an open-air pic-nic, was to return with a headache. I have great faith in pure air and sunshine as curative agencies, and believe that many of our delicate and invalid ladies would find renewed vigor of body and mind in the labors and recreations of the apiary. The

DREAD OF BEING STUNG

is an objection I frequently hear urged. I have no fancy for it myself, but as yet have found it no serious objection, nor the slightest damper to my enthusiasm. I am not one of the fortunate ones whom bees *never* sting, therefore when from scarcity of honey or from any other cause they are cross, I protect myself with veil and gloves, and am so seldom stung considering the time I spend among the bees that I never think of it as an objection to the business.

Women often complain that there is no inspiration in their work; that it holds the attention but does not prompt to study or investigation, thus affording little opportunity for mental improvement. In this respect bee-keeping is in marked contrast. A worker in the apiary is also a student, and is constantly meeting with surprises, and learning something new and intensely interesting. In Europe it is said to be considered an intellectual pursuit. As I have said, I knew very little of bees when I first undertook the care of them.

I supposed there were rules to be rigidly adhered to, any deviation from which would result in disaster. I therefore, at every step, anxiously consulted Langstroth, Quinby, or Prof. Cook, as was most proper for a novice to do, and to them am indebted for whatever of success I have achieved; but have since learned that in bee-keeping, as in other matters, there are many ways of accomplishing the desired end. Consequently I have sometimes ventured to disobey them all, and thus far without unsatisfactory results. Notwithstanding an acquaintance with the best authorities, there is still opportunity for every one to learn by personal observation and experience.

I but partially agree with those who regard enthusiasm indispensable to success. In the more ordinary vocations many do succeed in comfortably maintaining themselves and families, with very little enthusiasm for their work, often none, and sometimes with even positive dislike. Then, bringing the same determination and good sense into use, why not, in a similar degree, succeed in bee-keeping without enthusiasm? I admit its great desirability but regard it as a possession too uncertain to be relied upon. However, I believe it to be a natural outgrowth of the

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in almost any department, and that she who interests herself in bees for the sole purpose of making money, may gain her object, and also find herself an ardent lover of her occupation.

My own experience in the apiary has been a source of interest and enjoyment far exceeding my anticipations, and it is a matter of regret to me that for a few years I must forego its pleasures as well as profits. **MRS. L. B. BAKER.**

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Smith's Grove, Ky., May 16, 1877.—"The prospects here are good for a rich honey harvest." **N. P. ALLEN.**

Foul Brood.

READ BEFORE THE MICH. CONVENTION.

Foul brood has been a terror to bee-keepers, wherever it has appeared. The greatest care often amounts to but little. Apiaries die out, and the labor of years results fruitlessly. Our best scientists are wrangling as to its origin. The fact, however, is established that foul brood can be cured without the loss of the comb, and in the most simple manner.

Mr. Hilbert, one of the most thoughtful of German bee-keepers, was the first who by the use of salicylic acid effected a radical cure of foul brood in his apiary in Prussia. His recipe is: 50 grains of crystalized salicylic acid, dissolved in 400 grains of pure spirits. One drop of this solution in a grain of distilled water is the mixture to be applied. It is to be used lukewarm in order to have it effective.

Foul brood is a vegetable growth, and is destroyed entirely as soon as it comes in contact with salicylic acid, while the latter is entirely harmless to all animal life—even to the tender larvæ of a bee. Spirits, however, will destroy this life, if not used with proper care. I had two foul brood hives in 1875, and in the fall of that year considered them cured. One of them I lost in the following spring, and the other showed signs of foul brood again after the honey harvest of 1876. There was a good honey harvest, and previous to this there were no signs of foul brood; but at the end of August this hive had not 20 per cent. of a healthy brood. In most of the cells was a bad-smelling, brownish, ropy substance. Some of the cells had a healthy appearance, but on opening them the brood, in most cases, were dead and decaying.

I showed Mr. Hilbert's recipe to our druggist, who proposed to improve it by adding borax. One part of this solution to 18 parts of distilled water was my medicine. For a quart bottle-full of the mixture I paid 50c. It can be used in any temperature but ought not to be cold enough to chill the bees. I used this with one of Atkinson's atomizers, which cost $1.50. I took the foul brood hive, set it off the stand, and put a new hive in its place. Comb after comb was taken hold of, and every capped brood-cell was uncapped. I then proceeded to cover both sides, bees and all, with a fine spray of salicylic acid and borax. The bottom of every cell became wet; and the bees adhering to the combs got a good drenching. After this treatment, each comb was hung in the new hive in the usual rotation. Two combs in the hive had very healthy-looking capped brood, which I thought not necessary to disturb. Three days afterwards I did not find a sign of foul brood in the hive. Every cell containing the nasty matter was nicely cleaned out, excepting those few combs which I had left uncapped. They were now as bad as the others had been. I then subjected them to a vaporizing with the other combs in the hive, with the bees adhering to the combs. The cure was complete. When winter commenced, this hive had a great deal of healthy brood and young bees, and is now one of the best I have.

Salicylic acid and borax can be purchased, already mixed, in any drug store. My druggist thinks that my success is due to the borax. While, in my case, a single treatment effected a complete cure, Mr. Hilbert's plan (as given in the German bee papers) is a rather laborious one.

Cincinnati, O. C. F. MUTH.

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For the American Bee Journal.

Western Illinois B. K. Association.

TABULAR STATEMENT OF OPERATIONS.

NAMES.	No. of St'ks		Condition in Spring.	Where and How Wintered.	Temperature.	No. of Stocks				Name of Hive.	No. of Frames.	Size of Frames.	Amount of Honey produced.	Extracted.	Amount of Wax.	Principal sources from which honey was obtained.	Average value of honey season.	Amount of sugar fed in fall and spring.	Average price received for honey.
	Fall, 1875.	Spring, 1876.				Fall, 1876.	Spring, 1877.	Sprin.											
								Italians.	Hybrids.										
L. C. Axtell	63	63	m.	Cel, str.	38	125	115	Mi	xd	Q	12	11½x19½.	5000	1062½	...30	White clover......	G	...	21 .
Wm. M. Kellogg	12	11	m.	B. H.		22	9	...9	..	L	12	11½x12¼.	.312	...312	..10	Fruit blossom	. M	....	20
Hardin Haines	26	19	m.	O. D, str		81	75	.55	20	Q	9	10½x19½.	B2156	...40	...25	Linn and clover	G	100	22½
N. L. Jarvis	48	38	g.	. Cel	12	103	99	75	21	K	12	13½x12½	3000	....	....	Berg. & golden-rod	..G	..	17..
N. H. Derr	37	27	m.	Cel. .	33	82	80	Blk	80b	L	10	17⅝x9¼..	..2650	. 1100	...30	Basswood & clov'r	.M	.100	22½
Jas. A. Simpson	11	9	g.	.O. D. .	..	31	30	...7	23	L	10	11¼x11¼.	..1670	..1628	7	White clover. . .	..G	...	16..
Hollingsworth & McGaw	..	60	m.	..Cel. .	33	150	38	50	109	.	10	17⅝x9⅛..	..3188	.790	caps	Wild Bergamott .	..G	..	13..
T. G. McGaw (Monmouth)	..	40	m.	..Cel. .	45	80	80	74	..6	L	10	17⅝x9⅛..	..2612	.....	.100	White clover.	..G	.	22

NOTE.- Cel. for cellar; B, blacks; O. D., outdoors; M., medium; G., good; B., in honey column, box honey.

Do not know the number of stocks Mr. Hollingsworth wintered, but think about 80.

HARDIN HAINES, Sec.

For the American Bee Journal.

Can Women Keep Bees with Profit?

To the inquiry I might simply answer yes, decidedly, and append my signature. But I presume you wanted more—a little experience. Not having kept a journal, I cannot be very definite. After three years of loss and mishaps as amateur and beginner, in which the profit and loss about balanced, I began in 1875 with ten stocks, in the old American hive, none of them full. All were hybrid bees. I had some natural swarms, but generally prevented such. I lost three swarms which went to the woods, and closed the season with four strong stocks, with plenty of winter stores and something over 2,200 lbs. of honey, all of which, except what the family used, was sold at 16 to 25 cts. per ℔, most of it at 20c. All the bees, up to March, were in fine condition; all were heavy and breeding finely. It being cold and windy, they were replaced in the cellar from which they had been removed; very warm spring weather followed. Illness prevented proper attention, and all but 16 young swarms fretted to death.

Sickness and death in the family prevented much attention to the bees, but in autumn I had again 40 stocks, but only about 1,300 lbs. of honey. Honey sold for 16 to 25c., and two stocks for $20. At present all the stocks are doing well. I now use the double American hive, with some of my own improvements.

I have given my bees very imperfect attention, yet for every dollar spent I have received at least five. I feel sure I can do much better. It is a healthful, interesting, and profitable pursuit. The lack of a suitable market is the only risky feature in bee-keeping.

Mrs. M. A. Bills.

For the American Bee Journal.

Dollar Queens!

Can a bee-keeper get a living by producing good, unwarranted queens for one dollar? Yes! and we will prove it. With 50 good colonies of bees in movable frames and 12 colonies in box hives, without assistance, we can rear, in 60 days, 500 good queens, and wind up in Sept. or Oct. with as many colonies, in movable-frame hives, as we started with, and, if in a good honey season, with a considerable surplus of honey.

Coming from as noted a breeder and shipper of Italian queens as Ch. Dadant, the article from his pen on page 164, May number of A. B. J., is calculated to mislead the uninformed in the mysteries of queen rearing and goes far to create the impression that cheap-queen breeders are unreliable; that desirable queens cannot be produced for $1; that 50 good colonies of bees are destroyed in their production; that after expenses of advertisements, stamps, cages, mailing, etc., less than $200, with no bees are left the breeder, which as a matter of course is a losing business, and those who engage in it are not long in finding it out and leave the business to others, after a short trial.

Now all this is mere assertion and to the uninformed Mr. D's figures look very plausible, but are not correct. Nothing wrong, but he does not tell all.

No doubt Mr. D. gives the price of labor and queens correctly in Italy, but that has nothing to do with colonies and queens in the U. S. We do not wish any assistance, no matter how cheap, in the queen rearing business, and as to the price of bees the native brown can be purchased in any season in log and box gums at from $2 to $2.50 each, strong in bees and from 25 to 30 lbs. of honey per gum. We know of two parties who have for years sold first swarms, containing from 8 to 10 quarts of bees and a queen, for one dollar—the party purchasing furnishing empty hive. These bees are just as profitable to the buyer as if he paid $10 for them. The price did not make them less valuable, and $1 queens, although not so profitable to the producer are none the less so to the purchaser.

If Mr. D. does not expose these $1 queens for business sake, pray tell us why he undertakes to expose them? Is it for the good of the bee business and fraternity? No! Do we find the question answered in the very next sentence in his article? "We have resolved not to sell a home-bred queen this season." We cannot ship from Italy, pay carriage and duty, and sell at $1. Mr. D. has heretofore tried to impress, in journalistic articles,that on account of some climatic influence, the absence of the brown bee in Italy, or something else, that as pure bees cannot be produced in the U. S. as in Italy.

Now, Mr. Editor, friend D. is too intelligent a bee-keeper to take such a position. You are aware the African from the shores of Ethiopia has become no whiter and his hair no straighter, through generations of residence on the sugar, cotton, and rice plantations of the Gulf States. The Asiatic breeds of poultry have not deteriorated one iota by removal from the pent-up yards of the Orientals. The merino produces as fine a fleece and is as much at home in the Central basin of Tennessee as on their native hills.

But for the figures in this queen business. Although we can purchase at less figures, let us take from Mrs. Adam Grimm, whose advertisement we see in the Journal, 50 colonies of pure Italians at $6.50, $325; purchase 200 nucleus hives to contain 3 frames, same size as above, $100 (and they can be had for less money); 400 extra frames at 5c., $20; 12 colonies of brown bees in box hives at $2 each, $24; and we have an outlay to commence queen rearing of $469.

On April 15th we will remove the queens from 20 of the strongest colonies, as we have plenty of drones and drone brood. On April 25th, we will break up these colonies into nuclei, making an average of 6 nuclei to the hive, to contain from 1 to 2 pints of bees. This will give 120 nuclei. We will break up the 12 colonies of brown bees into nuclei, making 72, which added to those in the frame hives gives us 192 nuclei. The 20 colonies broken up contained 200 frames of honey and brood, and of the 12 colonies of brown bees, we transferred brood and honey into 120 frames, which gives us 320 frames only, to go into 200 nuclei. We want 80 additional frames of comb, as our nuclei is to have only two full frames, which we get from the remaining 30 colonies, and in their place give empty frames. Each 200 nuclei now has 2 frames of comb and brood, a queen cell, and, as before stated, from 1 to 2 pints of bees. Some will hatch in 10, 12, or 14, and the longest will require 16 days. So we will count the longest time and will count 200 queens on May 1st, and in 8 days more they have been fertilized and are depositing eggs, and are then $1 queens, and are removed. This brings us to May 9th.

We will now go back and tell you that on May 1st we removed from the remaining 30 hives of Mrs. Grimm's pure Italians the queens from 15 of the most populous,and by cutting holes through and scarifying the comb, about the eggs, we get an average of 15 cells to the hive, which is 25 more than we need for our nuclei. On May 10th we remove one cell each to our nuclei that we removed queens from, and leave our 15 full colonies also to rear a queen. Now, giving the 16 days for the perfect queen and 8 days for fertilization and depositing eggs, brings us to May 25th, when we have 215 queens ready for shipment; they are removed. On May 16th we made the remaining 15 of our Grimm purchase queenless, and on May 26th we cut out cells for our 200 nuclei and also for the 15 full queenless colonies, leaving 15 cells in those last made queenless. Now, giving the same time as heretofore, brings us to June 9th, with 230 more queens. How does the account stand?

Twenty pure Italian, tested, queens, bought of Mrs. Grimm, removed April 15th, and counted at $1, $20; 200 untested queens removed from nuclei, May 9th, $200; 15 tested queens bought of Mrs. G., removed May 1st, and counted at $1, $15; 215 untested queens, removed from nuclei, May 25th, $215; making $450, with 230 queens on hand. We will dispose of only 180 of them, at $1, $180; making a total of $630. We retain 50 young queens, and instead of multiplication and division, that we have heretofore practised, we will try addition and substraction, and unite 4, 6, and 8 nuclei into one colony, and when judiciously handled and managed the 50 colonies can be ordinarily, in our section of country, made strong and healthy stocks long before the honey-producing season is over.

Let us now recapitulate. What have we sold and what have we on hand? On hand, Oct. 1st, 50 colonies, as good as they were in April, at $6.50, $325; 200 nuclei hives, good as new, at 50c., $100; 400 extra frames, good as new, at 5c., $20; sold 50 queens, of original purchase, at $1 each, $50; sold 595 queens, reared in season, at $1 each, $595; total $1,090.

Our work commenced say April 10th and ended June 10th. We will give the $90 for advertisements, stamps, cages, pens,ink and paper, and get in cash, hives, honey, and bees $1,000, less $469—our original outlay—for 2 months work. Does not that look as though a bee-keeper can get a living by producing good, unwarranted queens for $1?

There is but one question about the business, and that is purchasers. The queens can be reared as we have stated. Although in our queen rearing we pursue not exactly the plan laid down. We use hives containing 21 and 32 frames to rear cells in and break up at the proper time, with nuclei, admitting the same size frame, some 2, 3, 4, and 5 frames.

For queens getting lost in their bridal excursions, we make an allowance of 10 per cent., as we obtain a greater average of cells than given. Cages and nurseries can be used for the superfluous virgin queens and they retained without detriment until their sisters have taken their bridal flight, and if unsuccessful in returning, take their place, and only 2 or 3 days are lost. The $1 queen-rearer does not, like the bee, "work for nothing and find themselves." Imported queens costing you $5 or $7, are no better than a good home-bred queen costing $1 or $2. We have queens removed not less than 40 generations from imported mothers, that will compare favorably as to color, size, docility, and energetic workers with any imported Italians, whether there be black bees in Italy or not. W. P. HENDERSON.

Murfreesboro, Tenn., May 8, 1877.

For the American Bee Journal.

The Deborah Hive.

The writer has had in use the following hives: the Bay State, Langstroth, Quinby, and the German hive. They are all good hives, but, like sewing machines, they have certain merits and defects. It may be safely asserted, without particularizing any of the above hives, that a broad flat hive is not suited to Northern climates. Large combs are liable to melt; long, deep combs are difficult to remove and many bees are crushed, and intricate hives are expensive.

The following hive, I believe, has none of these defects. It is called the Deborah hive, simply to distinguish it from others. It is not patented; easily made; cheap; portable; can be carried by one person; gives ready access to the combs; the combs are movable; are not large enough to melt, and the bees are not irritated in the necessary operations. For northern latitudes it is the best shape; it is the right size; can be inspected at all times; can be enlarged or reduced to suit large or small colonies; the overplus of drone comb can be removed; the bottom board can be changed for a clean one; rain cannot wet the floor; the size of entrance is easily changed, and the surplus honey removed with ease. In recommending this hive, it is to be understood that the writer has no pecuniary interest in it. No one has it for sale, but any person who can handle a saw and hammer can make one for himself. This hive received a medal and diploma at the Centennial. The criticisms of apiarists are asked for.

The main hive is composed of two boxes placed one upon the other. Each box is a foot square in the clear, and 9 inches high. Placed together you have a hive 18 in. high, and containing 1½ cubic feet—say 2,592 cubic inches. The front and back of each box is rabbited out at the top ½ in. to allow the frames to set in, of which there are 8 in each box. The frames are made of stuff 1 in. wide, 3¼ in. thick, and 8x11 in the clear. Supposing the hive is made of board 1 in. thick, then the top and bottom will be 14 in. square.

Handles are placed on each side of the box, and by taking out one screw the handle can be turned up vertically and screwed to the box above, this holds them tight together. Ring screws are very convenient for this purpose. For a stand on which to place the hive in winter, take a board say 2 ft. long and 14 in. wide; nail it on cross pieces at each end. These cleats are 2x3 stuff, and the hive is made to stand close to the ground. For the entrance the hive is pushed forward 1½ in. on the bottom board. This gives an entrance the whole length of the hive, say 12 in. long and ½ in. wide. This can be enlarged or diminished by simply pushing in a block on each side. For surplus honey a box 6 in. high and 1 ft. in the clear is placed on top. The handles on the upper box of the main hive may also be turned up and temporarily screwed to the surplus box, I thus secure it in its place. It may be filled with frames or small boxes.

Only the main features are here given. It will be part of the apiarist's amusement to fill in the details to suit himself.

To make one box of the main hive, the writer takes 8 pieces of the following dimensions: Two pieces 9x12, the grain running the longest way, and six pieces 3x 14 in. The two pieces 9x12 form the front and back, and are rabbitted out ½ in. The three pieces 3x14 made one side, and by not nailing or screwing the middle piece you can fill in the space with glass and let the middle piece cover it. If you please, plane off the middle piece the thickness of the glass and it will be flush with the side, and a button will secure it.

If you wish a long hive in the honey season with a larger surface on top, place the two boxes of the main hive side by side; first unscrewing the sides which come together, a piece of galvanized tin underneath the top and bottom pieces holds the hive together.

In the fall, the boxes are again placed one above the other for wintering, and the wooden side screwed on without removing the tin. Sometimes there is a little excresence of comb when the glass goes in, but that is easily remedied.

Holmesburg, Pa. D. C. MILLETT.

For the American Bee Journal.

Bee Smoker—H. Nesbit.

I have used Quinby's smoker for 3 or 4 years; I paid $1.60 for it, and would not be without it for three times its cost. I had not used it long before I found it needed many improvements. I found it rather hard to set down on its head, even on a level surface. In six cases out of ten it would tumble over on its side, and if left in that position would go out in 2 or 3 minutes, and then the time and trouble to re-light it is too well known to bee men to need any coment. I also found it apt to get out of order. I have been repairing and improving it till everything about it is new except the wood part of the bellows; and the whole thing would have been new, but for want of a steel spring, to suit my notion for one I had invented and intended making this spring, had I not seen a new smoker described by T. F. Bingham, of Abronia, Mich.

I bought one on trial (if it did not suit he was to take it back). I received it a little more than two weeks ago. Have been at work with it almost every day since, and gave it a fair trial. I could not ask for a better one. I have never seen Quinby's improved one, but I can say this of Bingham's: I would not give it for a dozen of those like the one Quinby sent me. It will set on its head at once, even on a rough surface; but that makes little or no difference, for if laid on the side it will not go out like Quinby's. It gives a stronger puff and burns slower, and will retain the fire almost twice as long. The saving of time a single season, in lighting it so often as Quinby's requires, is alone worth the price of it. It is strong and substantially made and not apt to get out of order. It is just like the one I had intended to make, with two exceptions; but whether these would be any improvement I cannot say. This one suits me well enough not to ask for a better. I never burn anything in them but rotton sugar tree and elm. Never use tobacco on bees, nor in any other way but for gapes in chickens.

I suppose you have heard of the death of H. Nesbit, though I see nothing in the April number about it. I did not hear of it myself till lately, by a letter from his only daughter. He fell from his chair while reading a paper, and died suddenly with heart disease, some time in Feb. Mr. Nesbit was honest and upright in all his dealings; and no one knew the busy bees better than he did, and how to manage them with the greatest ease and to the best profit. The bee fraternity has lost a valuable friend in him. He and I carried on a very extensive correspondence with each other on bees. He was frequently classed with such men as Quinby, Grimm, Gallup, etc.

Lowell, Ky., May 4, 1877. R. M. ARGO.

For the American Bee Journal.

Michigan B. K. Association.

MR. EDITOR:—I have read the report of our State Bee-Keepers' Association with interest. Very many of our State's largest and most successful honey producers were absent; and, as might be expected, we find much in the report that has little worth for us who are trying to "get on" in this avocation. "Shall women keep bees," "Shall farmers keep bees," and "Reciprocal benefits of bees and plants," etc., are all good jobs in their line, but amount to little or nothing to the real honey producers of Michigan. Whether all farmers and all women enter our ranks or not, may have some bearing on the success of those who have already invested, as well as those who are soon to join us; but whether many or few enter this, or any other branch of business will depend on how the prospects look, rather than how essays read, or what you or I may say about it. Every calling seeks its just level with all others, after a while, and the matter before us is merely a difference of opinion in regard to the "high water mark" of apiculture.

Pres. Cook's address, as is usually the case, is right to the point, *i. e.*, is upon the right and important subject, but alas from all I have experienced, and all I know of the subject, is full of mistakes and shows a want of experience. I am glad, very glad, that our country is well supplied with philanthropic institutions; I hope to see more organized each year. But I do not believe that the Michigan B. K. Association ever contemplated making philanthropy its object, neither do I believe it should, neither do I believe it can, neither do I believe many who make claims in this direction are honest in that claim, for most of them are not honey-producers proper, but apicultural "middle-men," who see their interests forwarded by so doing. But it has been plainly said that *some* bee-keepers are selfish or they would harp on the same strain. This cannot be said of me, for never did I expect that mine or any other's words would change this current one iota, and further, I, to-day, am firmly resolved to detatch myself from bee-culture at my earliest opportunity.

Eight years ago I had 3 acres of small fruit in bearing. I also had an apiary of 40 to 50 colonies. My raspberries and strawberries netted me 9½c. per qt., all through the season. My extracted honey about that time was in good demand at 19c. per ℔., net, or about $70 per barrel. We had extra honey seasons along then—say 1870-3. You may guess that I was not long in deciding which business to throw up and which to put all my time and thought to.

The law that Prof. Cook speaks of, viz., supply creating demand, being true of fruit and many other things (but not honey) kept the price of berries firm, and more than that gave them an upward tendency till now. My dealer in the city writes me thus, in answer to questions: "I can buy choice white, extracted honey for 8c. per ℔; comb in small boxes is slow at 12c. to 14c. per ℔. Choice strawberries were not sold out of my store, last season, for less than $6 per bushel."

By the above we see that while honey has declined more than half at wholesale, berries have advanced more than 20 per cent. Having had considerable successful experience in both these branches of business it seems to me as plain as ever truth was told, that the big stories and talk about "this much neglected pursuit" by the nurserymen, has more foundation than the same kind of preaching by our inexperienced and middle-men apiarists. Prof. Cook, in his essay, in throwing out inducements to all to join in honey raising, very appropriately and wisely appeals straight to the pecuniary selfishness of mankind. But a little further on calls some one, or some faction, "selfish" and "sordid." I cannot think who has imagined bee-keeping a "good thing" since honey sank below 10c. per ℔? and this sinking it was what caused many to think that the good of those already in the business, and those that thought of joining, demanded a stop to the supply.

My father and also Mr. Bingham have been traveling the past few months, and they both affirm that the markets have now honey enough to last over, if not a pound was produced during 1877. In regard to the healthfulness and pleasure of bee-keeping, I cannot agree with the Professor, but rather think Quinby was right when he said that the definition of bee-keeping was "hard work." I know of no business not sedentary, so terribly trying to the nerves as handling bees. I know of no worse habit for the production of dispepsia than tasting honey continually, which is a common habit among bee-keepers who are around it so much. No labor can be more ill-adapted to the muscular system than one that holds it in a strained position a part of the time, and then asks you to carry heavy loads carefully, or you will injure them. Bee-keeping is not to be compared with fruit culture as a pleasant and healthful occupation, in my estimation.

This may not be thought by some to be the proper place to print such remarks, but I think the editor would rather print truth, or even honest error, than so much axe grinding. All the interest I have personally in this debate, is that when Old Time proves my statements, I may be allowed to "flap my wings and crow," and say "didn't I tell you so?" Such is human weakness. and you know I don't make any claims to be "perfection;" only outspoken and honest. I would rather be honest and right than popular. Better be even the head of a dog than the tail of a lion. "The man who prays out loud every chance he gets needs watching."

Yours for the truth, whether dark or bright, JAMES HEDDON.

Dowagiac, Mich., May 5, 1877.

For the American Bee Journal.

Bees of the same Colony Fighting.

Mr. Marvin, in March number, tells us why bees of the same colony fight, but if he had told us how he knows those things, we could understand then whether his statements were founded on experiments or mere guess work. First he says "Queens should not be handled at any time if it can be avoided; as they are liable to contract an odor from the hand, and sometimes from the cage, that their own bees mistrust the queen not being theirs and kill her; and all bees that have come in contact with her are liable to be killed also."

Now if Mr. Marvin ever had a case of this kind, how can he prove that it was the odor that caused the fight? Would it not be more natural to suppose that when the queen was removed a short time, the bees missed her and immediately commenced preparations for supplying her place; when she was returned some bees were disposed to receive her, and some were anxious to kill her, and they not all being of one mind, they would have a fight over it? But I never saw a case of the kind. Bees will sometimes kill their queen when they want to swarm and the queen refuses or is unable to go with them.

As to bees fighting because they contract an odor while they are out of the hive, is not according to my experience. My experience is that, in most cases, a bee that comes in with a load of honey can enter any hive and will be gladly received, and only those that come with a hostile intent are fought. I have had several cases of bees of the same colony fighting, and in every case I found the hive destitute of honey and none to be had in the field, and just as soon as they were fed, fighting ceased; I am satisfied that it was hunger that made them desperate.

HOW TO HAVE ALL WORKER COMB BUILT IN BROOD CHAMBER.

Many think this a very important consideration, as well as what to to with drone comb. Here is my recipe, and if it don't work I will not charge anything for it: Start each frame with a strip of drone comb about an inch wide. When they have all the drone comb they want, they don't generally build more. A strip in each frame seems to satisfy the bees with drone comb, and in many cases they will not make another cell of drone comb in the hive, and it puts the drone comb where it will hardly ever interfere with the rearing of brood, as the tops of the frames are used for storing honey nearly all the time.

Lawrence, Kan. N. CAMERON.

For the American Bee Journal.

That Queen Bee.

Bees have wintered very well considering the terrible cold weather of Dec. and Jan. My bees commenced to carry in pollen on the last day of March. I have been a bee-keeper upwards of 20 years, and never knew them to carry it in so early in the season but once before. We had a cold April, and bees dared not venture out of their hives.

I want to say to Mr. F. Searles, through the JOURNAL, that I intend to raise as good queens as any man, and if he has read the A. B. J. for the last 15 years he knows that I do, and have the credit for it, too. I find that those queens were sent him on Sept. 25th. If his bees breed drones all winter he must expect to raise black ones. As my bees do not raise drones in winter, I cannot say whether they would be black, yellow or white.

Does not this statement about breeding drones in winter seem rather curious to most readers? It does to me.

A prominent bee raiser in Ohio wrote to me that he had some fine Italian bees (much better than mine, in his opinion) and advised me to order some of him. I sent him $15 and in due time 3 queens came. Two of them were the color of our native queens (black) and one was yellow. This was several years before those black Italian queens were imported. I returned the two black queens by return mail and kept the yellow one. Of course I was disappointed in the color of them, as the person of whom they were ordered promised me something very nice.

A short time after he had received the queens, a very prominent bee-keeper, and one who formerly wrote a good deal for the JOURNAL, and who afterwards gave up the business to practice medicine, with cold water, made him a visit. Of course, those two queens were trotted out, and lo! behold, they were both yellow. Probably the visit to New England caused their color to change. They were yellow, for both queen breeder and visitor said so. The one retained proved to be a very inferior hybrid.

Now the part of the story that I want friend Searles to read is this: I have been informed by several very prominent and well-known bee-keepers that this same man, who had such pure stock, has been breeding all his younger queens from queens he obtained indirectly of me. They were not bred on Kelly's Island, 15 miles from the main land, as per advertisement; for Novice says that this man never raised any queens there at all.

I think my queens are fully as good as friend Searles' (if we except the unusual quality of breeding drones in winter). I have bred queens for 15 years and occasionly we get orders from customers that we supplied with queens during the first season we began business. We have an order now for 50 queens to be sent as soon as they can be raised, from a man we have supplied for years.

Mr. Searles' opinion of our queens and that of the two well known bee-keepers in N. Y. State, as given in our advertisement, differs greatly. If friend Searles sends me a queen, send it by mail, and not through the JOURNAL. I will be responsible for her if she dies in transit. H. ALLEY.

Wenham, Mass., April 12, 1877.

For the American Bee Journal.

The Centennial Award on Extractors.

FRIEND NEWMAN:—On page 158, May number of the JOURNAL, concerning the query of M. D. T. about the award of the Centennial Exhibition on American honey extractors, who says he can only find one in the official list, I would say that I have not seen the official lists, and if I had, I should not be surprised to not find it, for you know that it was almost impossible during the exhibition to find some exhibits on the list —after finding the exhibit itself. I know it was for me, and I know that it was much trouble for others to find in the catalogues all the exhibits; for some of them were not catalogued at all—although on exhibition, properly entered, etc. Among the numerous exhibits mistakes were liable to occur. You ask for a copy of the official notice or reference to the page in the official lists, where it can be found. As I have no official lists to refer to, and cannot well copy the Centennial seal, I send you the original document, as I received it.

Some have asserted that I received no award at Philadelphia, and that I was advertising what was not so, by saying that I had, but I think the enclosed document will satisfy you that I only represent facts. Allow me to say further that the extractor I had on exhibition was one that I had used in my own apiary for two years; it was not made for the Centennial show, but for use. I merely cleaned it up a little and sent it on, after having received permit to do so. It appears that the judges were practial bee men (at least Gen. Oliver, of Salem, Mass., who was the judge, is); they saw in it a "special fitness for the purpose intended," and granted me the award of the grand medal and diploma. I know, from the great number sold and many favorable reports received (not one word of fault found in their use, from my customers) that it is, as one man of large experience in apiculture expressed it, the best extractor made; and he speaks from practical knowledge of other machines.

HONEY KNIVES.

In regard to the round-pointed, curved-blade honey knife, I do not claim to have made the first one—because I don't know what others have done before me. I only said I made the first one I ever saw or heard of, in 1871; you printed it 1870—either a slip of the pen or type.

The weather is very cool; the fruit blossoms are very few; the trees appear to forget that it is the middle of May; bees are dwindling badly. I have had to double some, and shall have to double up more unless it warms up faster than it has for the past four weeks; but we hope for hot times by-and-by for our bees, and expect as usual, good things from the JOURNAL.

FRANK W. CHAPMAN.

Morrison, Ill., May 15, 1877.

[Friend Chapman sent with article the original award of the Centennial Commission, duly "signed and sealed." This will of course satisfy M. D. T.; if not, however, friend Chapman says he will return it to us to be seen by any one desiring it, at any time.—Ed.]

For the American Bee Journal.

Wintering Nucleus Colonies.

I use Quinby hives, but prefer one smaller, frames 18½x10 deep. In the fall I double up swarms, till they fill the spaces between 8 combs. Select two frames, very light, not more than 3 ℔s. each, and about a quart of bees (I winter some with not more than a pint); put in two division boards, so that the two frames may be in the centre of the hive with division boards on each side, packed with old rags and chaff on each side also a layer of rags on the bottom. Pack with chaff on top, 6 in. deep; cap on top for ventilation. Bore an inch hole near the top; tack over it wire cloth, and leave a small hole at the bottom—say ⅜x1 in.

I winter all of these on summer stands, without loss. If in the spring none of your bees are queenless you can sell early queens and with the bees build up other stocks.

Vermont, Ill. Hardin Haines.

For the American Bee Journal.

How my Bees Wintered.

I put 83 colonies in my bee house about the middle of Nov.; 70 of them in prime order; the rest light, and by mistake left one out-of-doors through Dec. and Jan. I put my bees all out in Feb. and let them have a good fly; the comb was bright and nice. The main thing to keep comb bright is to have the hives and comb dry and free from frost when put into a frost-proof house, and they will come out the same if not diseased, or have poor honey.

In Feb. I found one good swarm queenless, one light, and another with a drone-laying queen, another starved to death, and I let two others starve to death by carelessness, as I supposed they had honey enough to carry them to the 1st or middle of April. When the cold weather came—the last of Feb.—I put them all back in the bee house, but 25 of the strongest that were within 2 in. of the ground; when the snow storm came they were mostly drifted under, and I left them to the mercy of the weather, but they came out all right. I carried out those in the bee house for the second time, the first part of April, and found another dead; could not discover the cause. My bees are now doing splendidly; breeding rapidly and having no indication of spring dwindling.

Those that were wintered on their summer stands, so far as I have heard, are in poor condition; some have lost all, others half, and what are left are weak and dwindling away. It is less trouble to put my bees in a house than to fix up out-of-doors. My house is 16x18 outside, two sets of studding, boarded inside and out, with 1 foot of space filled with sawdust. The lower joist 10 in., boarded on under side, and that space filled with sawdust, and room 8 ft. in clear, with 18 in. sawdust over head. The upper joist is boarded on under side. The building is above the ground, and sets on a wall 18 in. thick, with room to get all around under the floor, by throwing out some of the dirt inside the wall. There are two holes in the wall, on opposite sides, for ventilation, and a hole in the middle of the floor to let pure air in, and a tube in the centre of the ceiling, with two elbows, to let out the heated air; the heavy or foul air can go below or into the cellar, you might call it.

R. R. Murphy.

Garden Plain, Ill., April 16, 1877.

For the American Bee Journal.

To fasten Strips of Comb Foundation in Sectional Frames.

Make a block a trifle less than the length and depth of your frame, inside measure, and half as thick as your frame is wide, less half the thickness of your foundation; nail this block on a suitable board, and fasten the board on your work-bench or otherwise, slip your frame over the block, and lay your strips of foundation on it. Take a piece of copper wire 4 in. long and 3-32 in. thick, flatten one end of the wire about ¼ in. in length and ⅛ in., or less, wide; then file away from each side of the flattened part till its diameter is even with that of the wire, bend the flattened part a little and attach a handle to the other end of wire, so thin that it will roll in your fingers like a lead pencil. Have a burning lamp, and put the wire diagonally into the top of the chimney, where it will rest, suspend, and soon get hot; then with a strip of pasteboard or wood push your foundation firmly against the frame where it is to be fastened and hold it there. Now take the hot wire and pass it along the edge of the foundation where it touches the frame, the motion of the hand must be regulated to suit the heat of the wire, which is best done by quick, repeated motions of some 3 or 4 in. in length. At first you may not melt it sufficiently to adhere to the wood, or you may melt it down, but don't be afraid to try it. By a little perseverence you will be enabled to fasten it quick, neat, firm, and exactly in the centre.

For starters and guides I prefer the foundation to everything I have tried—wax, wood, or natural comb. I have white comb but use the foundation in preference. For guides I find two rows of cells sufficient, and have used some single rows successfully.

Henry Crist.

Stark Co., O., April 14, 1877.

For the American Bee Journal.

The Price of Queens.

I would like to reply to a question in the May number of the Journal by Mr. Dadant, viz: "Are dollar queens profitable to the buyer? No! cheap product is often dear at any price," says Mr. D. Within a very few years Mr. D. sold his imported queens at $15 each; now the highest figures for them, by the single queen, is but $7.00. That is coming down rather more than one-half. Now, has the quality of the queens depreciated or only the price? I presume that his queens are just as good at $7 each as they were at $15.

There is not much money made in raising queens at $1 each, but if a man will work for a small profit, or even for nothing, his products may be worth as much as they would be if his profits were large. No man will retain his business by selling an inferior article. Would the quality of the $1 queens be better if the same breeder charged $7 for them instead of $1? No! and if the $7 queens of Mr. Dadant were sold for $1 I think they would be just as good as if he received $7 for them. Mr. D. has come down more on the price of his queens than any man in the business, and now he finds fault because other people can sell for less money than he can.

The difference is not in the quality of the goods purchased but in the profit realized by the producer. Mr. D. says he has received a number of letters showing that $1 queens are dear at any price. Well they are unless they are properly reared.

"I do not expose these dollar queens for business sake," says Mr. D. Of course you don't; that is well put in; there might have been some misunderstanding on that point. However, I am of the opinion that every one who advertises queens for sale, whether it be at $1 or $7 each, does not understand the business thoroughly, and I do not believe that a man with but one year's experience can raise good, perfect and prolific queens. If I remember correctly, there has been considerable said in favor of $1 queens in the various bee papers, and I never saw but little said in favor of $10 queens. Mr. A. I. Root first started the $1 queen business, and most breeders had to fall into line or dry up—a thing most of them did.

The best way to settle the question of $1 and $7 queens is for some disinterested person to test them. Is Mr. D. ready for the test?

A READER AND DEALER.

For the American Bee Journal.

Over-Stocking.

"Well, says one, "has not Jasper Hazen written enough on that subject to convince the most stubborn?" Yes, of course; but let us look at another phase of the subject. In all my reading on the subject of bee-culture, I have looked eagerly to see what the writers had to say on over-stocking. Mr. Langstroth says he smiles to hear any one expressing fears on the subject. But not one of them has said a word about over-stocking the market with honey—a far more important consideration than the gathering of too many bees in one place. We may all talk and write as we please about the profits of our business, but if we cannot sell our honey readily at fair prices, the same as other products of the farm, it behooves us to be prepared for the worst when it comes. Now, if our products come into competition with the necessaries of life—flour, meat, potatoes, etc.—then surely we might strain every nerve to increase both the amount of our honey and the number of our colonies, but such is not the case. Honey comes in competion with the luxuries of life—fancy articles, which the grocer keeps for sale.

Now let us look for a moment at the honey markets, as reported in the Chicago weekly papers, and which are not supposed to have any special interest in the honey markets. I turn to one dated March 24, 1877, and read:

"Little doing except in a small way; choice white, quotable at 15@16c. ℔ ℔; but in lots holders could not realize more than 14 or 15c. Strained, at 8c."

Now as we raise honey in lots we could only get the latter price, and then deduct commission, etc. But I read an article in the May number from Prof. Cook, who states that bees will give from 100 to 300 per cent. profit on the capital invested. Now, I don't believe any reader of the JOURNAL can convince me that bee-culture pays better than farming, both being conducted intelligently. Our farmers here are content with 10 per cent. on capital invested, with as good land to farm as there is in the State. But it may be asked why do we keep bees? I will answer this. I keep them because I like them so well, and because I expect if taken good care of, they will yield me as much profit as anything else on the farm.

Cambridge, Ill. J. V. CALDWELL.

For the American Bee Journal.

The Barnes Foot-Power Saw.

I will add my testimony to those given in the May number, in favor of Barnes' foot-power saw. Some 8 years ago I tried to saw my lumber for bee hives by a horse-power saw. But, for some defect in the machine, it did not work, and the $100 put in it was a dead loss.

Of course, after such a trial, I was very little disposed to buy a new sawing machine, yet I resolved to send for Barnes', on trial. I received it about 3 weeks ago. We had about 10,000 ft. of laths to rip for our frames. The machine was very soon put into working order. We were astonished to see the ingenuity of its construction. Of course we had to learn how to run the machine, and how to file and set the saws—both of these arts are neither difficult nor take long to learn, yet unless you have mastered them you cannot succeed. Suffice it to say that after a few days my son succeeded as well as desirable, and that now nearly all our frames are nailed (about 1700) although my son worked only during the rainy days, with a boy 14 years old helping to nail the frames. Our machine will soon be paid for by the saving of money yearly given to the lumber mill for laths. The work is nearly as smooth as if planed.

The scroll saw is a true plaything, and so light to run. The cross saw is a little harder to run, but works fast, and I could not imagine, before seeing it, that a 16 ft. board could be cut in two, and true to square, on a table saw only 28 in. square; and what a smooth cut! The four sides of a hive cut by this machine can be nailed without being planed, as is the case with hand-sawed boards.

As to the rip saw, if you want to work fast, you must choose the dryest and softest wood for the frames, as it is the hardest to run. The grooves in the hive can be made by the saw, and truer and faster than with the plane. In fact, now that we have tested this machine to our satisfaction, we would not sell it for any price, were we unable to get another.

I am so well pleased with this machine that I will try to have it introduced in France and Italy. I have just written to the bee journals of both these countries to make it known among the bee-keepers.

Hamilton, Ill. CH. DADANT.

Our Letter Box.

Logansport, Ind., May 10, 1877.—"Bees are doing very well here." M. MAHIN.

Austin, Minn., May 12, 1877.—"The Bingham smoker is received, and is complete in every particular. It works to a charm and is substantial in its construction."

I. INGMUNDSON.

Montgomery Co., N. Y., May 11, 1877.—"My bees wintered well. Had 118 in cellar, and lost one, and two were queenless."

C. C. VAN DEUSEN.

Douglas Co., Ill., May 11, 1877.—"I lost 4 colonies out of 230 in wintering. It no doubt occurred because of a lack of honey last fall. Our honey gathering here was only in June and July, so the bees went into winter quarters aged and infirm."

A. SALISBURY.

Bruce Co., Ont., April 28, 1877.—"Bees wintered good here, gathering pollen for two weeks. I wintered mine in a cellar; the temperature being 35 to 38°. They ate very little all winter." A. J. MACKAY.

Cedar Co., Mo., April 23, 1877.—"My bees have wintered well, on their summer stands. I have 32 colonies, all in good condition. We have taken 1,600 lbs. of extracted and 400 lbs. of comb honey during the past season." PH. BOSSERT.

Kokomo, Ind., May 10, 1877.—"Colonies that were strong in the fall, have here wintered well, both in and out-of-doors; but many failed to secure sufficient honey in the fall, for the winter, and not being fed perished before spring." A. T. WRIGHT.

Hartford, N. Y., May 7, 1877.—"I have run my apiary for both extracted and box honey. Honey mostly from white clover; but little basswood and fall pasturage. I winter in a dry cellar. The following is my report for the past year ending May 1st:

Dr.	
To 53 swarms @ $10	$ 530.00
40 hives @ $2	80.00
Improvements in bee house and yard	200.00
Steam engine, 1½ h. p	175.00
Honey extractor	10.00
Wax extractor	4.00
Cart	10.00
Tools, etc	35.00
	$1044.00
Cr.	
By 3000 lbs. extracted honey, @ 14½c	$ 435.00
1200 lbs. box honey, @ 20c	240.00
16 swarms (sold bees only) @ $5	80.00
20 lbs wax @ 30c	6.00
90 swarms, in fall, @ $8	720.00
Total Cr.	$1481.00
Total Dr	1044.00
Balance in favor of Cr.	$ 437.00

"During the past winter I lost 2, and found 4 queenless, which were united with others. I have now 83 swarms. Those that were doubled in the fall, came out extra strong. I hope to make balance in favor of Cr. show better this year. Bees have wintered well here."

J. H. MARTIN.

Pottawattamie Co., Kansas, May 5, 1877.—"The grasshoppers have done but little harm, and I think we are out of danger now; we have croakers who belong to the do-nothing class, just waiting to make their predictions verify, but those who follow the advice of experienced farmers and plowed late and early, turning the eggs and young 'hoppers under, deep, for manure, have nothing to fear, but will have the satisfaction of raising extra crops, as from a sprinkle of guano. Eggs are only deposited in bare lands, so that the plow proves their destruction, while they benefit the land by fertilising. Twenty years residence here has taught me the above. I expect 1,500 bu. of peaches, and apples in abundance, besides a large crop of grain and honey this season." JACOB EMMONS.

Georgiana, Ont., May 10, 1877.—"My report for the year ending May 1, 1877, is as follows: Began the year with 4 colonies, increased to 9 and took 2 cwt. of comb and extracted honey. Went into winter quarters with 9 hives on Nov. 27th, placing them in one corner of my cellar which I had petitioned off with boards and lined with newspapers, forming a dry, dark and warm apartment 4x10 ft. in size, in accordance with the number of hives; left nothing on the top of hives but the quilts and some straw matting made out of old packing covers of bottles which I singled out. For ventilating the apartment I bored 6 one-in. holes 12 in. apart through a 2-in. joist on top of cellar wall, thus obtaining a current of air from the draught holes in the foundation of the house. In these inch holes through the joist I had stops, so as to close them in extreme weather and open again when milder. By this means, I could regulate the temperature so evenly that the thermometer averaged 40° all winter. Some of my stocks becoming a little uneasy during the fine weather of Feb., I gave them a fly on March 1st, they then remained perfectly quiet till April 14th, when, owing to the early spring, I placed them on their summer stands, all in good condition but one which proved to be queenless and swarmed out. The remaining 8, by May 1st, had sealed brood and was in every way doing well."

D. P. NIVEN.

Jones Co., Iowa, April 30, 1877.—"I put 38 swarms in cellar on Nov. 15; set them out on Jan. 31; average temperature of cellar, about 45°—a little too warm for strong swarms, as they were somewhat uneasy. Lost none, but 4 were queenless; loss of bees very small, and those building up finely now. Feb., pleasant; March, cold; April, very pleasant until the 27th, when it turned to winter again, snowed all day yesterday and froze quite hard last night."

J. E. HUNTER.

Henry Co., Iowa, May 1, 1877.—"Last fall our apiary numbered 55 swarms; this spring only 44. Our bees had dysentery, some of them are very weak. We wintered about 30 swarms in the cellar. Father thinks those out-doors wintered the best. We have been feeding them rye meal this spring. They are carrying in pollen. We extracted 4 barrels of honey last summer, and had 1,000 lbs. of box honey. Honey is not readily sold here. The spring has been rainy and backward." MISS L. J. NOBLE.

Kenton, Tenn., May 2, 1877.—"I have 44 colonies of bees, all but 2 in good condition, and they are queenless. I started in the spring of 1873 with 4 colonies in box gums. I have increased from natural swarming. I have them now in 2-story Langstroth hives, and about half of them Italianized."

J. W. HOWELL.

Hubbard, O., May 3, 1877.—"I report 18 stocks on hand, May 1st; 12 were wintered on summer stands, packed round with hay, chaff on top; 6 were kept in cellar, 3 of which had a fly in Feb., the other 3 were in cellar till April, and came out in as good condition as the others, 2 rather weak, the others in good condition." J. WINFIELD.

Jersey Co., Ill., April 18, 1877.—"Last year was a poor season for bees here. They did tolerably well until about July 20th; after that they gathered but little honey, it being too wet. They went into winter quarters in poor condition and wintered poorly; some having lost nearly all their bees. Nearly all who keep bees here have them in the old box hive, set them up in a corner of the yard, and let them go it on the 'root-hog-or-die' principle, and the consequence is they have lost heavily by it. Mine came through the winter all right, and are breeding up finely now. I winter on summer stands with quilts over the frames and filled in with straw. I fed some last fall. What we want here is more subscribers to the JOURNAL, to dispel some of the ignorance that exists in regard to bee-keeping. I saw an old bee-keeper the other day, who said he had lost 14 out of 38 colonies, and most that were left were weak. He said bees should never be fed; wanted no Italians or frames in his hives; had kept bees for 30 years; knew all about them; yet he had not been able to get more than 20 lbs of surplus per hive in one season. But we see he fails to comprehend the first principles of bee-keeping." H. D. EDWARDS.

Fayette Co., Ky., May 14, 1877.—"FRIEND NEWMAN: The Barnes saw you sent me has come to hand all right, and I am much pleased with it. With a little practice I think I can operate it well. It cuts smoothly and leaves the work in good style."

L. M. LAND.

Fremont Co., Iowa, April 28, 1877.—"I cannot report as favorably as I expected in Feb.; then my bees were taking a clensing fly on their summer stands, and seemed to be nearly as strong as when they went into winter quarters. But since that time we have had a taste of spring dwindling, and met with some loss, and would have lost considerably more had I not united several weak ones that were too weak to build up. The spring has been very unfavorable, as the weather has been cold and rainy, and bees have been unable to gather anything, and the prospect now is that the fruit bloom is killed, as to-day finds us with fully 3 inches of snow on the ground, and the fruit trees that were blooming yesterday are to-day covered with snow and ice. I think our wholesale dwindling this spring was caused by a lack of young bees at the beginning of winter, and most likely the fruits of our honey drouth which commenced about the middle of Aug., which in a great measure stopped the breeding that should have kept up until Oct. The bees that I wintered out-of-doors in a shed prepared for the purpose did better than those in the celler, but my weakest ones were kept in the cellar which was dry and free from frost. I only lost one by dysentery, and that was a black stock, the only one I had. The Italians showed no signs of dysentery.

"In my article in April number, page 125, there is a slight mistake. It should have read thus: 'we got a little surplus from the linden bloom; but from about the middle of Aug. honey was a failure.'"

JOHN I. MARTIN.

Jasper Co., Iowa, April 24, 1877.—"Bees have come out worse here, this spring, than ever before. I put 67 in the cellar last fall, but now have only 27 left; some of them weak. My bees were all right in Feb.; we had good and warm weather during that month, and I put my bees out. March set in rough and very cold; then I put my bees back in the cellar again, and from that time on they began to die and seem to be at it yet. They look and act healthy one day and the next they are sickly and crawl out of the hive and die, with the hives full of honey and pollen. But I did not fare any worse than others. The oldest bee-keeper in the county has only five stands left out of about 100. Another has 2 left out of 29; others lost all they had. Of the last named there are a great number throughout the county. Last season bees did well here, both in swarms and surplus honey."

CHRISTIAN GRIEBELING.

Chickasaw Co., Iowa, April 23, 1877.—"By the January number I learn that O. O. Poppleton has considerable trouble in wintering. I am in the same latitude, but I have no trouble. I winter in the cellar altogether, while he winters out-of-doors. My bees did well last winter. Out of 18 I lost only 1. The cellar was somewhat damp and some of the combs were mouldy. I did not have any ventilation. I think every cellar ought to have a good ventilator, where bees are kept. My method of wintering is: first, to have plenty of wholesome stores; secondly, to have all good, young, thrifty queens; and thirdly, to have a good, dry, well-ventilated cellar; with all these points in view I think bees can be wintered with safety. I generally leave my bees out until settled cold weather comes, then I put them in, leaving off the caps, to give upward ventilation. I use the American frame, and like it much better than any I have yet seen. I use the honey quilt on my hives, and leave the bees in the cellar undisturbed until April 1st, then set them out and they are all right. Last spring I had only 10 stocks when blossoms came. Increased to 20, and got about 400 lbs of mostly extracted honey, and sold it readily at 20c. and 25c. per lb. I could sell more, without any trouble."

ED. J. HILL.

Koshkonong, Wis., April 23, 1877.—"Nov. 24, 1876—No. of stocks placed in cellar, 99; temperature, most of the time, from 38° to 40°. Feb. 7—Gave bees a chance to fly; temperature from 40° to 42°. Finally it approached and past 50°, when, on April 4th, I placed them outside again. Loss up to date, 11 stocks, and a few more likely to follow."

D. P. LANE.

Lee Co., Ill., May 18, 1877.—"I had, on May 1st, 132 stands of bees in good condition. This is the best spring I have seen for many years. I consider I have passed one of the worst winters for bee-keeping I ever knew, considering the condition bees went into winter quarters." R. Miller.

Fort Atkinson, Wis., May 1, 1877.—"From 10 to 75 per cent. of the bees in this vicinity are dead; cause—poor honey and want of proper care." L. M. Roberts.

Angola, Ind, May 1, 1877.—"I packed 25 stocks of bees in marsh hay, adout Dec. 1st, with quilt on frames, nothing in caps, and entrance contracted. Have 20 now (10 good, 4 medium, and 6 weak). I use the Farmer's Hive, modified, with 9 frames, 12x13. Bees —16 Italians, 4 hybrid."

Wm. Macartney.

Steuben Co., N. Y., May 17, 1877.—"Last winter was hard on bees here, as well as spring. Those that wintered out lost heavily in the winter, and those kept indoors lost heavily in spring. I put 150 in the cellar and left 6 out. I put them out on March 24th, all alive, and they appeared to be storing honey, but our long cold spring will reduce them 20 or more."

D. S. McCallum.

Pointe Coupee, La., April 12, 1877.—"I have 52 stands of bees, all in good order and doing well. Could begin extracting honey by the 20th inst. without injury. White clover is already yielding considerable honey. This together with willows and other honey-producing flowers which have been in bloom for several weeks past, renders this quite a desirable bee country; and the great success of Mr. Chas. Parlange with his splendid apiary located in this parish has induced numbers of other residents to imbark in the bee business. You may reasonably expect quite an extensive list of subscribers to your excellent Journal from this section, when the new bee-keepers get fairly started in the business."

Robt. Montgomery.

Grant Co., Wis., May 15, 1877.—"Bees are doing first-rate. I like the Bingham smoker I got of you. I tried it as soon as I got home, and it will keep the fire long enough and is *some* on smoke I assure you."

H. F. Walton.

Lawrence, Mich., April 13, 1877.—"Last fall I had 34 swarms; I have lost to date, 15; alive now, 23. I wintered on summer stands, with blanket on top, and 2 to 4 in. of chaff in super. I use the Langstroth and American hives. Bees are all in good condition at present; about one-half very good. Commenced bringing in natural pollen on April 10. To the best of my knowledge, three-fifths of the bees in this vicinity are dead; one neighbor has but 35 left out of 108." Dr. A. S. Haskin.

Woodville, Miss., May 14, 1877.—"I was not able to give my bees necessary attention during the winter and early spring, and so lost half or more in consequence. Have 16 stocks now, one of them with 30 and another with 40 frames, which I think gave me nearly as much honey as all the rest put together. I never was so unfortunate in losing young queens, owing to bad weather, rain, cold, and high winds. Had very little good weather. The first honey I extracted this season was from the holly, then a little flow of poplar; now the bees are gathering honey from the magnolia principally. It is very pretty and thick; those who like orange honey would like it."

Anna Saunders.

Appleton, Wis., May 7, 1877.—"Although we have had a comparatively mild winter, yet I find that many bees have died. The loss is principally with those that tried to winter on the 'will do' principle. Those that were put into winter quarters as they should be, are doing well, nearly 4 weeks earlier than usual. Probably not over 5 per cent. have died, while those mismanaged have seven-eighths dead. With one or two exceptions, those that have lost largely are those that get along without a bee paper or any elementary books. I have changed my mind some of late years. I used to encourage persons that manifested a desire to keep bees, but now I say to them, if you won't post up, don't pay out your money for them and loose it. Success to the Journal. With 12 bound volumes of it I feel that I have got a treasure." A. H. Hart.

Edgefield Junction, Tenn., May 7, 1877.—"The past winter was one of great severity. Even the mulberry and peach trees are nearly if not entirely killed. No peaches this year, except on the highest land, where a fair crop will be gathered. The crop of strawberries, of which many acres are cultivated here, promises to be unusually fine. The first shipment from here will take place about the 13th, and goes to Cincinnati. The grass, owing to frequent rains, is very fine, especially is this true of white clover. The few bees kept here will have a fine range and probably gather a large crop of honey, should the weather be favorable. Clover is now beginning to bloom and the bees do not fail to give it their sweet compliments. Most of the usual spring bloom is over.

"Bees, as usual everywhere, have not gathered honey enough to support their brood, and have drawn heavily on their last year's honey, of which they have so far had plenty. The old apiary of Dr. Hamlin will this spring, to all intents and purposes, be numbered among the things that were. His precepts still linger, and almost every old family has a few Langstroth hives bearing the Doctor's name, and showing the marks of time also. Your correspondent has met with about the average loss from the usual causes which conspire to kill bees. My apiary will be shipped to Abronia on about May 15th, if the weather in Michigan should be usually auspicious. By that time the hives will be as full of bees as are safe to ship so far. I expect to make the journey in about 5 days and nights, no accident occuring. What the summer may bring forth is as yet an unknown quantity."

T. F. Bingham.

Lawson, Mo., April 25, 1877.—"Out of 100 colonies I lost 16; some died from want of honey, others got too warm, they crawled out of the hive on to the cellar floor and could not get back. The balance came through strong, with a few exceptions, and are now gathering honey from plum blossoms." J. L. Smith.

Brillion, Wis., May 7, 1877.—"In May, 1876, I had 4 swarms; 1 in a movable-frame hive. I transferred the other 3 swarms. In the fall I had 11 good swarms, and got 160 lbs. of honey. The last of the season was cold and wet. I bought 25 swarms for $225, mostly hybrids, in movable-frame hives. I also bought 14 swarms of hybrids in Langstroth hives for $125. When I put them in the cellar I observed frost in the hives. I set them on frames 2½ ft. high; took off the covers and put on blankets, also cleats with wire-cloth over the entrance holes, and over a 1⅛ in. hole near the top for air. On the last of Jan. I was surprised to find that rats had knawed the blankets and eaten the comb from under the top of the frames. I suppose the rats wanted a bed in the winter and honey to eat, but it meant death to the bees. The next day I built up the frames and cleaned out the bees—more than a ¼ bushel of dead bees. I put 8 swarms out to fly on Feb. 6. The last few days they were in the cellar they had dysentery; it was too cold out, and too warm in the cellar, for the sick bees. I set them out on April 6 or 7. I have now in all 19 swarms and have 9 swarms more on shares. I hope soon to have my empty hives filled with bees and make use of the comb again." O. E. CLARK.

De Vall's Bluff, Ark., April 26, 1877.—"The Bingham smoker was duly received, at once given a trial, and found to be a decided success. Not only is there a sufficient volume of smoke to readily subdue the bees, but it remains ignited and ready for use when not constantly operated. I even stopped for dinner, and found it in order when ready to resume my work among the bees. Though it is the most perfect implement of its kind I have yet seen, it is not without its defects. In the first place my fingers were burned by coming in contact with the heated tube or furnace. I then wondered why this part was not concealed by a piece of zinc, with a small air space between that and the tube. Zinc not being accessible, I made a cover from a small piece of wood, ⅛ in. thick, and the length of the bellows. I left about 3-16 in. space between this cover and the tube, for an air space; and lined the cover with tin to prevent its burning. Instead of leaving it square at the top, I took off the corners, leaving it rounded. To secure it in place, I fastened a strip at the bottom, on each side, reaching to the edge of the bellow's platform; and fastened them to the platform by means of small screws. Having pointed it, the whole has a very neat appearance, and is not bulky or inconvenient. On the contrary, it is more convenient than before, for you do not have to avoid getting your fingers against the heated tube. And it seems to me that if the tube which comes off was made of zinc instead of tin, it would be easier to remove for the purpose of renewing the fire.

"I also found that when it had burned low, sparks would be occasionally emitted; and fearing to ignite the sawdust with which the grounds of my apiary are covered, I set about remedying this difficulty. I took a piece of perforated tin—perhaps wire-cloth would be better—and cut it round, to fit into the base of the tube which is taken off. To secure it in place I used the device which secures in place the false bottom of the smoker proper. I find this to answer the purpose perfectly; and not only that, but it serves to distribute the smoke better, making it come in a more continous volume as it were. And this does not interfere with the free passage of the smoke.

"I will close here, or you will think I am preparing to apply for a patent. In its present shape I regard my smoker as a real luxury in the apiary." W. W. HIPOLITE, M.D.

Henry Co., O., May 7, 1877.—"I had eight colonies last fall, all Italians. I put them into winter quarters on Nov. 24th; all came out safe on April 1st. Lost one queen on April 15th, the balance all right at this date and doing fine. I wintered in a house 16x20, walls 7 in. thick, 4 in. of packed sawdust between ceiling and sidings. I kept the thermometer from 40° to 45°, by artificial heat with stove in adjoining room. I had top box on and filled with oat straw, and blanket next to the bees on top of racks in lower story. Mortality has been very great all over this county; four-fifths have lost all their bees, and the balance have lost one-half. Some have lost 200 colonies out of 230, so that I can safely say that $4,000 would not make the loss good. Poor honey was the principal reason. The JOURNAL is a very welcome visitor, and is carefully read and re-read." D. BARTGIS.

Irving, Kan., May 3, 1877.—"My 18 stands of bees wintered nicely, and are storing some honey from fruit blossoms. There is a fair promise of a good fruit season this year. And so far as our little pets are concerned, we may say that we have good reason to hope well for them, if the grasshoppers are not too troublesome. But there is no telling what may become of the 'hoppers; they are ordinarily very vigorous and seem to endure both rain and frost without injury. The birds are making great havoc with them as they hatch out. In many localities they do not seem to hatch well. The eggs appear to be addled or eaten by grubs." C. E. GAYLORD.

Cass Co., Mo., April 21, 1877.—"My bees are all right, I did not loose a colony last winter; nor have I one that is queenless. I think I am entitled to the blue ribbon. I had 15 bu. of rye ground for them to work on. I commenced to feed in Feb., and about April 10 they had gathered all the fine meal that was in the rye, as there was not much for them to get elsewhere. They went down to Johnson's mill and took possession of it for a few days. He was feeding his cattle ground corn in troughs; they took possession of the troughs and the cattle finally concluded that the ground corn was not wholesome. My pets are now very busy; the peach and plum trees are in full bloom. Last fall I had 120 colonies, and have that number yet. So any one can judge whether I take care of bees or not." PAUL DUNKEN.

Charles City, Iowa, April 16, 1877.—"I put 15 colonies in the cellar about Nov. 15th, and I put them on their summer stands on April 6th, all in fine condition. They are working on rye flour and starting brood nicely. I have 8 Italian and 7 hybrid swarms. I have been very successful in wintering my bees; never lost a swarm in wintering or springing yet. I take the honey board off and place a mattress, made of chaff or fine shavings, over the top and leave the caps off. I put them in a dry cellar and kept the temperature about 35° to 40°. I also have plenty of bottom ventilation. About Aug. 18th, I hived two natural swarms, and gave each of them a set of yellow foundation, filling the frames about two-thirds full; they now have a very nice set of combs, and are starting plenty of brood in them. I think if the foundation is made with 5 cells to the inch, there would be no trouble about the queen laying in them; and when we learn how to use it we can get them finished without sagging, if made of pure beeswax. I am sure they use the same material to lengthen the cells out, as far as it will go. I tried a piece of white and yellow in the same frame. When they make new comb they cluster themselves together to produce the material. When they work on foundation they scatter all over and work more separately. I have several styles of hives, but only two sizes of frames—American and Langstroth. I have made a lot of frames with metal corners this winter, they are made of galvanized iron, placed in a fine saw scaff in the middle of the wood on the upper corners and clinched on the top and inside of the side pieces. They are nailed in also with some ¾ in. finishing nails. The frames are made without any projecting ears of wood on the corners, as the metal corners project out far enough to rest on the rabbits. In this way they are not liable to get stuck fast with propolis. I will send you a sample and you can give your opinion of them. I tried them last summer and they worked well." Levi Sutliff.

[They are similar to Novice's in shape, but heavier, and on that account not so desirable as his—though we prefer the projecting top bar *a la* Langstroth.—Ed.]

Rock Co., Wis., May 21, 1877.—"I commenced 5 years ago with 4 swarms; have sold 100, and now have 130. I have taken 34 swarms from one in that time, by putting a card of brood in a hive and setting the old one away and putting the new hive in its place, and giving it a queen. I had one year 1400 ℔s. of honey; the next, 3500 ℔s. My bees are in splendid condition. Lost through the winter, 5 nuclei and 1 swarm. I agree with Cyula Linswik, women should keep bees; they can do it as well as men. Bee-keepers that took care of their bees had but a light loss, but those that depended on the bees taking care of themselves, lost heavily; some lost all they had; some half; others two-thirds. My bees are all Italians I had drones flying on April 18th."

Mrs. D. M. Hall.

Warren Co., Ill., April 24, 1877.—"I took my bees here (home apiary), 80 stocks, out of the cellar on the 6th inst., in fair condition. Have sold some, will probably begin work with about 70 colonies. Mr. Hollingsworth, myself, and Dr. D. G. Campbell, wintered about 200 colonies in a cave on the Mississippi, 5 miles above Oquawka, Ill. I have now at the river, 38 stocks in medium condition. Mr. N. L. Jarvis put in a cave adjoining ours 108 stocks in the fall; took out 104 alive this spring. Has been selling some; will probably start this spring with 75 stocks. Mr. Hollingsworth's and my bees were taken out of the cave on the nights of the 17th and 18th inst. Mr. W. M. Kellogg, of Oneida, Ill., will take charge of Mr. Hollingsworth's bees this season. There is no need of any one going to California to go into the bee business. Taking the difference in freight and other expenses, the locality between Oquawka and Keithsburg, Ill., is just as good as California. The *Monarda Fistulosa* or wild bergamot grows by the thousand acres in pure sand. Drought nor cold does not seem to kill it, and 1,000 colonies could be kept in one locality and find plenty to do."

T. G. McGaw.

Fulton Co., Ill., May 17, 1877.—"My colonies are averaging, per hive. 1½ ℔s of honey per day. This is earlier than I ever saw it before in this section of the country, for honey." Hardin Haines.

Morgan Co., Ala., May 1, 1877.—"The year 1876 being an uncommonly poor one, bees did not make honey enough to support themselves during the winter, and gave no surplus honey. We winter our bees on their summer stands; do not know anything about wintering in cellar, etc. At least ⅓ of the bees in this county died during the past winter, on account of severe weather and lack of honey. I lost 5 out of 16; others lost more or less. We use any kind of a hive here. A hive over 12 or 14 in. high will not suit this climate, the weather being too changeable. Bees are scattered all over a hive, say to-day, with the thermometer at 65 to 80, and by 12 o'clock, p.m., it is freezing; naturally bees become chilled and die. I have observed that bees do better in the old box hive than they will in a tall, patent hive. I have cut all my 24 in. patent hives down to 14 in., and find my bees are doing better, being more contracted and the heat equalized. About May 1st, I put on the top, with frames 6x12, or honey boxes. Our bees are in their glory now, plenty of young brood, some swarming, and making surplus honey; and should the weather continue favorable, we will have a bountiful harvest.

"In this town there are about 200 colonies, and in the county, about 1800. We knew nothing about patent hives here, until about 3 or 4 years ago, some few bought them; had their bees transferred late in the season when the colonies were weak, and the result was a failure. Some of them turned out regular moth harbors, especially a hive called the 'Tennessee Hive,' which has too many openings; the frames rest on a bottom and hang on a back board. When you wish to look in, you have first to take off the top, then open a front door, and pull the frames clear out to examine. In pushing the frames back, bees in bottom and rear of hive are crushed; and the door is warped, leaving a space at both sides for the moth.

"The indications at present are for a good honey crop, but should we fail this year, many will be disheartened in this section.

"I have about 50 chickens, old and young, running about my yard, but have never seen a chicken catch or swallow a bee; but have noticed my chickens running whenever a bee gets too close to them, and do not think chickens will eat bees; on the contrary, bees have stung and killed some of my young chicks.

"I have a colony of black bees that are building comb in glass honey-boxes, from bottom upwards." F. LUDWIG.

Schoharie Co., N. Y., April 16, 1877.—"My bees have come out better than I ever had them before. I have only lost 4 out of 114 stocks. Nov. 13 and 21, 1876, bees flew out for the last time before I carried them in the new bee house. Dec. 23rd, I bought 24 hives of bees—19 in frame hive and 5 in box hives. Feb. 12, I carried out 73 hives of the 89 (had carried out 24 a short time before). While the 73 were flying nicely, the weather changed to freezing, and I hurried them back into the bee house, as soon as possible. March 23rd, bees began to get uneasy, I took out 66 hives. March 24th, I took out the balance. There were 16 hives left in from Nov. 26 until March 24. After being disturbed 2 or 3 times by taking out the others, they came out as good as any.

"I think I have a plan that will work to a charm, and do away with all carrying and lifting of hives. I thought of it on March 8th, and made a place for 2 hives to winter in. My bee yard is situated on a steep hillside, facing the S. E. I have my hives arranged one row above the other; I make a box, without top or bottom, with a door to button on in front. I then dig a hole large enough for the box, 4x2 ft., with flag stuff, 2½x4 ft. laid on top and covered with earth. I then make a track 8 ft. long by 15 in. wide and 2 in. high of inch stuff. Then the stand to set hive on, 2 ft. long by 14 in. wide, 3 in. high, with small wheels with flange inside to keep it on the track. I then sat the hives on, and can have the bees underground shut up, or out in the sun, with ease at any time in the summer. Place one hive on top of the other, put straight in front, the door buttoned on the front, and I cannot see why it will not work well."

"I mean to test some hives next winter. One advantage is, any time in winter when it is warm enough for bees to fly, by taking away the door and straw, the sun will shine in and the bees can fly out; and I think it will be cool in summer. The cost per hive is $2. One of my neighbors has built a hive large enough for 10 swarms, with wire-cloth between each hive, with 4 in. of chaff around them. I will report how it works." BEN. FRANKLIN.

◆

USEFUL.—A bottle of ammonia is one of the most useful things to have always at hand. It will remove grease or solid spots from almost any goods, and one of the very best washing fluids is made of equal parts of ammonia and turpentine. It makes rubbing the clothes almost unnecessary, and also makes them very white without making them tender. House plants are stimulated in their growth and bloom by watering them with warm water to which is added a little ammonia. Two spoonsful to a quart of water is sufficient.

◆

☞ The Southern Kentucky bee-keepers' convention will meet at Drake's Creek Church, Warren county, Ky., on June 6th. All bee-keepers are invited to be present and put on exhibition anything in the way of apiarian supplies they can.

N. P. ALLEN, *Pres.*
H. W. SANDERS, *Sec.*

American Bee Journal.

TERMS OF SUBSCRIPTION.

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Three " " " " "	5.00
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☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Remittances to be sent at our risk must be by Post-office Order, Registered Letter, Draft or Express (charges prepaid). Make Post-office Orders and Drafts payable to Thomas G. Newman.

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and is a very valuable work.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be tested.

◆

A HINT TO BEGINNERS.—Those who may desire to read up in the literature of bee-keeping, are advised to obtain the first Volume of THE AMERICAN BEE JOURNAL. It is worth five times its price to any intending bee-keeper. It contains a full elucidation of scientific bee-keeping, including the best statement extant of the celebrated Dzierzon theory. These articles run through all the numbers, and are from the pen of the Baron of Berlepsch. We have but a few copies left; price, $1.25, in cloth boards, postpaid.

◆

☞ On April 30th M. Jewett wrote us, but failed to give his address. Since that we have received a letter with no signature or address of any kind. We shall not be able to attend to the business matters therein contained till we get these essential items.

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ERRATA.—In the April number, page 129, please read *intervene* for *interview;* read, a distance of 4 or 5 miles; for 40 stocks hived, read 46; instead of *adapted for*, read *adapted to*. H. B. ROLFE.

◆

☞ Subscribers will please notice the date upon their subscription labels and see that they are "up with the times."

◆

WARTS REMOVED.

A positive cure. Painless and stainless. Price $1. Order from Dr. Quincy A. Scott, 278 Penn. Ave., Pittsburgh, Pa., or through any druggist. A liberal discount to dealers. Circular free.

◆

Honey Markets.

CHICAGO.—Choice white comb honey, 15@18c. Extracted, choice white, 8@9c.

CINCINNATI.—Quotations by C. F. Muth. Comb honey, in small boxes, 12½@20c. Extracted, 1 ℔. jars, in shipping order, per doz., $3; per gross, $30.00. 2 ℔. jars, per doz., $6.00; per gross, $60.00.

SAN FRANCISCO.—Quotations by Stearns & Smith. White, in boxes and frames, 10@15c. Strained honey in good demand at 9@10c.; comb, 11@12½c.; beeswax, 25@26c. Extra fine grades of honey are firmer. Markets well supplied with low grades.

Rates of Postage.

We are requested to give the legal rates of postage to assist our correspondents in avoiding mistakes in mailing manuscripts and papers. Here they are:

All mailable matter called "domestic," *i.e.*, matter sent from one point to another within the United States, as distinguished from "foreign" mail matter, is divided into three classes, known as first, second, and third-class matter. These classes are subject to different rates of postage.

First-class mail matter consists of letters, sealed packages, matter wholly or partly in writing, except book manuscripts, local or drop letters, and postal cards. The rate on this class is three cents for each half ounce or fraction thereof.

Second-class mail matter embraces all newspapers, magazines and periodicals, exclusively in print, addressed to regular subscribers and mailed from the office of publication. The rate for this class is two cents per pound on periodicals issued weekly or oftener; on those issued less frequently, three cents a pound.

Third-class matter embraces all pamphlets, occassional publications, transient newspapers, magazines, handbills, books, maps and many other articles not included in the first or second-class. These are classified into two sorts and subject to different rates. The articles specified above, pamphlets, transient newspapers, etc., are subject to a postage of one cent for each ounce or fraction thereof.

Matter of the third-class must be done up in wrappers left open at a side or end, so that the contents may be readily examined without destroying the wrapper.

The rates of postage on letters and newspapers to Canada are the same as within the United States. The postage on letters to Great Britain, France, and Germany, is now five cents for each half ounce or fraction thereof. Pre-payment is optional. Newspapers go to these countries at the rate of two cents for each paper, no single paper to weigh over four ounces.

DER BIENENVATER

Aus Boehmen.

Organ des von Sr. Majestaet Allerhoechst Sanktionirten Vereines Zur Hebung der Bienen. Zucht Boehmens. Ercheint monatlich Einen Bogen stark, und kostet jaehrlich 1f.-50dr., oder 75 cents. Adresse,

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ITALIAN BEE PAPER.

L'**Apicoltore,** Giornale dell'*Associazone Centrale d'incoraggiamento per l'Apicoltura in Italia*, pubblicato per cure della Presidenza dell' Associazione, fondato nell'anno 1868; esce in fascicoli mensili di 32 pagine, con illustrazioni e copertini, il prezzo di abbonamento an nuo pel Regno e Canton Ticino e di L. 5 anticipate.—Austria-Ungheria, Svizzera, Germania, Francia: L 6.—Spagna, Inghilterra, Russia, America L7. —Un numero separato L, 1. Si spediscono gli arretrati a qualunque momento dell'anno.

Per le annate arretrate L. 4 ciascun volume, quando vengano acquistati in numero di tre almeno.

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The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, JULY, 1877. No. 7.

Editor's Table.

IS IT PURE?—About the first question asked by every one, when you offer them honey, is "Is it pure?" Why, of course it is. The "doctored honey" is out of the market now—there being *no call* for it, who would be so foolish as to manufacture it? To a large extent, bee-keepers are to blame for this. A few at a convention raised the cry, and all followed suit—crying, *impure!* when the fact is that ninety-nine one-hundredths of all the honey on the market is and has been pure.

This foolish cry militating against extracted and comb honey alike, has done much to "bear" the market, as well as to prevent many from using it that would otherwise have done so.

Pure honey can now be bought at a less price than the manufactured article can be produced for, so that bug-bear is played out!

We sometimes fear that some have heard the cry of impurity so long, that they think something must be impure. Hence, when showing a piece of pure, yellow beeswax foundation a few days ago to a person, we were saluted with—"Is is pure? I don't think so; do you?"

If bee-keepers thus sound the key-note and even commence the song, is it any wonder that a whole choir of voices should join in the refrain?

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WHITE'S EXTRACTOR.—Since our last issue friend White has made a vast improvement in the frame of his extractor—making it of four posts and mortised frame. The top is covered by a substantial and convenient cap; one-half being hinged to lift up with ease, and the whole can be unhooked in a few minutes and the inside examined or taken apart and cleaned with ease. With this strainer arrangement, when one is through extracting, the honey is also strained; and as it holds 75 lbs. of honey, more or less, it can be used as a receptacle for it till ready for bottling. This improved extractor is sold for $15.

CALIFORNIA HONEY.—In a review of the honey products of San Diego for 1876, the Chicago *Times* says that the honey product comes in third. It says:

> The product last year was 1,277,155 ℔s. The production and exportation of honey is among the chief features of business life here. One apiarist in this county has over two thousand hives, and for men to maintain from one thousand to fifteen hundred hives is no uncommon thing. The immense floral variety of the country joined to its phenomenally splendid climate, keeps the trees in thriving condition, and enormous crops of magnificent honey result. The shipments from single districts in this neighborhood amounted in some cases last year to over 100 tons of honey.

◆

REGISTERING SLATES.—By special request we have got some slates, 3x4 inches with a hole in the centre, for hanging on hives. They are very useful to note the condition of colony, time of swarming, or putting on of boxes, etc., or any item of interest, and can be hung on a tack on the side of the hive. Concerning these slates, friend J. M. Brooks says:

> "We can do everything with the slates that we can do with card registers, and they are more durable. We take particular pains in rearing young queens to note what particular queen-mother such a queen cell was reared from. With slates we can keep up a pedigree of our queens. It is a peculiar satisfaction to us when we find a virgin queen hatched, and extra nice in color, shape and size, to know what mother she was bred from. We do all our breeding of queens, or rearing of them, from our choicest stock, and always know from what queen they were reared. We shall want 100 of the slates at once."

We can sell them for 3 cts. each, or by the hundred for $2.50; they must be sent by express.

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☞ The *Our Home Journal*, of New Orleans, La., copies our article on Mr. McConnell's invention, but gives THE AMERICAN BEE JOURNAL no credit for it, and thus palms it off as its own.

◆

MR. EDITOR: In the last number of the JOURNAL you noted a remedy for bee stings. I know of a good one, too, which I shall be obliged to you to print. Put moist earth on the part affected, and it will cure it. J. A. JONES.

Eggs laid in Queen Cells.

The following letter is from T. F. Bingham, Abronia, Mich.:

"EDITOR JOURNAL—I send this day 3 queen cells taken from the edges of combs in which there were no other eggs within several cells. They are at the bottom of these cells just as queens lay eggs. The hive is two-story and full of bees, and ready to swarm. I intended to send you such cells for several seasons, but I always find them when too busy. Look at the size—drone cell size—and then think of the Wagner theory. If people only wrote as facts what they knew for sure, how it would cut down 'bad premises.' I could now find a thousand such cells in my apiary, each with just such an egg and just such a size, and so situated as to leave no doubt what they were made for, and that the queens laid the eggs in them in every case, as designed by the bees."

These queen cells, nicely packed in a box, came duly to hand, and proved to be just what friend Bingham describes.

The exact truth cannot be ascertained all at once. We are obliged to learn by degrees—"here a little and there a little." Hence theories once pronounced sound by even wise men are proved to be false, and must be discarded—however much we may respect the authors of them.

We do not doubt that the eggs were laid in these cells by the queen, their appearance and situation leaving no room for such doubting—though many still cling to the old idea that the queen never lays an egg in a queen-cell; that such are invariably placed there by the workers.

It would not be wisdom for us to swallow everything advanced as truth by our worthy and respected predecessor—Mr. Wagner. In our explorations of the mine of knowledge we often find where "the fathers" were mistaken, just as our children who may delve deeper into that mine, will find where we erred and misapprehended.

The use of the word "apiarian" as a noun illustrates the point. The pioneers of apiculture in this country not only so used it, but defended its use (see A. B. J., vol. vii, page 111) notwithstanding the fact that all the most learned lexicographers and philologists of the age have decided that "apiarist" is the proper orthography of the noun.

It is not our province to be groping in the darkness of the past—but in the bright sunshine of the present to search for truth as for hidden treasure—thanking our predecessors for all the light they have thrown upon our pathway, and using that light to assist us to vigorously persecute our investigations, knowing that the citidal of Heaven's great laws is to be entered only by those who untiringly search for these hidden treasures, we should press on towards that prize—and be satisfied with no one's "say so"—ever demanding the proof for all that is advanced for fact and truth.

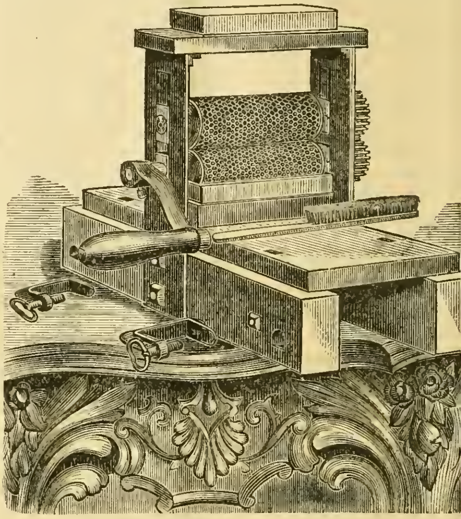
Notes and Queries.

COMB-FOUNDATION MACHINES.

"I have been thinking of getting a small machine for making comb foundation. I see you advertise one for $30 to make narrow strips for boxes, etc. I wish you would give a cut of it in THE JOURNAL; cuts assist us in getting a correct idea of anything. Do you think it will work well?"

JAMES BEST.

[Certainly; we have no reason to doubt but that Novice's $30 machine will work like a charm. We know of several having them, and have heard of no one complaining. He guarantees the machine to give perfect satisfaction. As wax is a hard substance it requires considerable power to run a large machine, but the small one will run comparatively easy, and turn out good work. There is quite a "knack" in doing it, which will have to be acquired, as with everything else.—ED.]



NOVICE'S SIX-INCH MACHINE.

MIGNONNETTE AS BEE FEED.

San Fernando, Cal., May 29, 1877.—"Please answer the following questions:

1. How much land will suffice for 50 hives?
2. How much seed would you put on half an acre?
3. What price is it?
4. Does it require much water?"

H. H. HOWARD.

[1. Should prefer borage or tall Chinese mustard to mignonnette. I have no data from which to answer the first question; but should suppose ten acres would keep the 50 colonies pretty busy, after bloom commenced, which is after white clover and alsike bloom.

2. I think 6 lbs. would sow an acre.

3. Cost of seed from $2 to $10, according to variety.

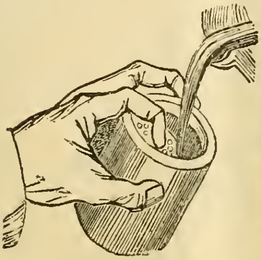
4. It grows well through dry weather; better in wet. Does well on all kinds of soil. After it blooms—July 1st—bees work on it till late in autumn.—A. J. Cook.]

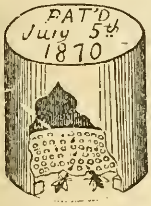
VAN DEUSEN'S BEE FEEDERS.

"Mr. Editor: I want to get a good bee feeder, and think I should like the Van Deusen. Can you not describe it in the Journal, as no doubt many others would like to get such a description as well as me?" John R. Gossage.

[The present season has shown the necessity of feeding, in order to save colonies that would have perished without it. So much cold and wet weather this spring prevented bees from gathering sufficient to live on.

The following cuts show the manner of filling and bees feeding from the under side.





C. C. Van Deusen thus describes his feeders and their operation:

A tin can of any desired capacity is made. This is furnished with a perforated tin cover, and a rim projecting about ¼ inch, which forms a shallow chamber for the bees to occupy while removing the feed.

An air tight connection is made between the can and perforated cover by means of a small strip of rubber, applied in a very simple manner. The feed is poured into the can, and the feeder quickly inverted and set over an open hole in the top of the hive, or directly on the frames. This brings the perforated surface on the under side, very close to the bees and in the best possible place for them to reach and remove the feed without leaving the cluster.

It may be set on wire-cloth and the bees will readily reach through and remove the feed when so used.

It does not ventilate the hive, and can be used at any season of the year. Any quantity of feed, from a spoonful to the full capacity of the feeder, may be furnished to the bees at a time.

It works equally well with thick honey or very thin syrup.

Is easily opened and closed, requiring but a moment to fill it—a great saving of time over many of the ordinary modes of feeding.

It is adapted to any style of hive in use, and, if properly sealed, there is no chance for any waste of feed, as the atmospheric pressure will prevent any escape of feed except as taken by the bees.

Sheboygan Co., Wis., June 16, 1877.—"I now have 22 colonies of blacks and 5 Italians. They are doing finely; they are in Hart hives. I wish to Italianize all of the blacks. When would you recommend doing it? Would you recommend trying to raise the queens or would it be best to buy them? My idea was to let them go just as they are until after the honey season, and then insert Italian queens. Would it be best to put them in now? It looks like a big job for me to raise and fertilize Italian queens with so many black bees.

"I divided several colonies; after 8 or 10 days they gave new swarms; some from the old hive and some from the new. Did they make queen cells after I divided them, or were they already formed, and if so, ought I to have destroyed them?

Jonathan Stoddard.

[This is a good time to Italianize. It would be best to purchase some queens, as new blood is a good thing for the apiary. You must have overlooked the queen cells when dividing. It saves time to give both colonies a queen, if you have it, destroying all the queen cells. If you have no extra queens, destroy all but one queen cell in the queenless colony. You would find a good manual of the apiary very convenient to consult at all times.—Ed.]

* * *

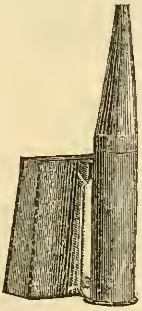
Additions to our Museum.—And now comes Novice with his two-story hive, arranged for comb honey in small sectional frames; chaff division board, feeder, transferring clasps, queen cage, cheese cloth, iron block for frame making, etc.,—all of which will be interesting to our visitors.

John R. Lee, of Oxford, O., has sent us one of his hives. It has 10 deep frames with the bottom bar in the shape of a V, and 9 shallow frames on top for surplus, with close top bars. Everything that drops runs out on the inclined plane bottom.

Kratzer Bros. & Stauber, whose hive—the Concord—is advertised in the Journal, have placed one in our office for criticism and inspection. It is a two-story, double-walled hive, with several new features, and attracts attention among our visitors.

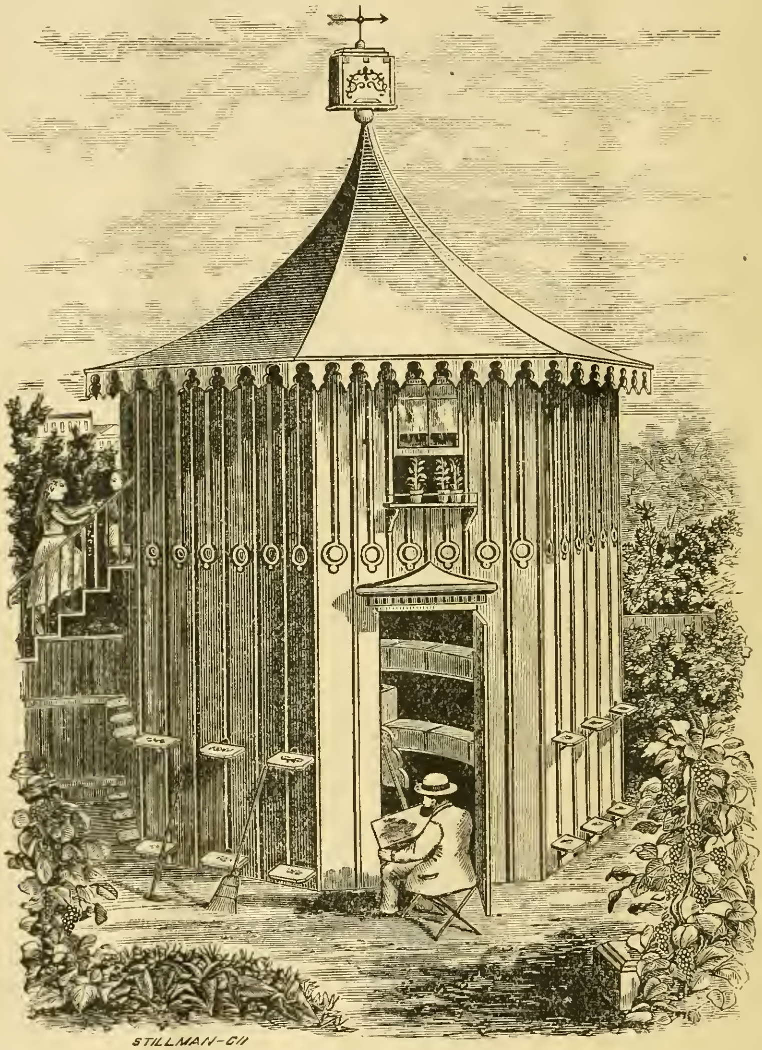
* * *

Friend Bingham has sent us his new $1. smoker. It is just like the $1.50 one, only smaller; and is suitable for those having but two or three hives. The accompanying cut gives a good idea of all his smokers. He also makes a larger size, for those having large apiaries. It is sent for $2.00. The dollar one is put up for mailing and sent post-paid for $1.25.



House Apiaries.

In response to a request, we give the following description of a modern house apiary building, in this issue of the JOURNAL. For the illustrations our thanks are due to friend A. I. Root, who remarked that they give a good idea of his own house apiary, with the exception of some of the ornamentation. His description is as follows:



My house apiaries are constructed of a square or oblong shape, but our objections to such, would be the difficulty of getting the bees out of the corners of the room (this might be obviated by having a square house with the doors at two opposite corners) and the increased danger of having both bees and queen get into the wrong hives. From the engraving of the house apiary and diagram of the ground plan given herewith, it will be seen that only three hives are on a side. The bees from the central one will of course recognize their own entrance, and those at each side, being the end of the row, will also find theirs without trouble. To make the entrance to each hive still more conspicuous we take advantage of the battens on the building, as will be seen from the diagram. The building is made of pine or other boards 1 foot in width, and these boards which are put on up and down, constitute the entire frame of the building. Six of them put as close together as they will come conveniently, form one of the eight sides, and the cracks are covered with a beveled batten, one edge of the corner boards being beveled slightly, that the batten may close the corner crack also.

A, represents one of the heavy outer doors, and B, the light door with glass sash; these doors are the same, on both the east and west sides of the building. G, is the shelf that runs entirely around the room, on which the hives are placed. It is about 3½ ft. from the floor, and should be about 18 in. wide. The hives are made by a simple division board E, that holds a pair of metal rabbets on its upper edge, one facing each way; the combs are hung on these, and when all are in place, a sheet of glass, F, bound with tin around its edges, closes the hive by being hung in the rabbets the same as are the frames. The top of the hive is closed by the usual sheet of duck. During winter and spring, the bees are protected by thick chaff cushions laid on the duck sheets. It will be seen that these sheets of glass face the spectator on all sides of the room, and when during the working season, we can see the bees filling sections and building comb just back of these glass division boards, the effect is more beautiful than can well be imagined. The room should afford as few corners where stray bees may get a lodging, as possible, and to this end, we close the triangular corners by bits of board I, I. They may have a knob on top, and these boxes will then serve for little cupboards in which to keep various utensils. If the room is open a great deal, the bees are inclined to waste time in buzzing against the glass, therefore it may be well to have a cloth curtain to drop over them, except when we wish to examine the progress of the colony.

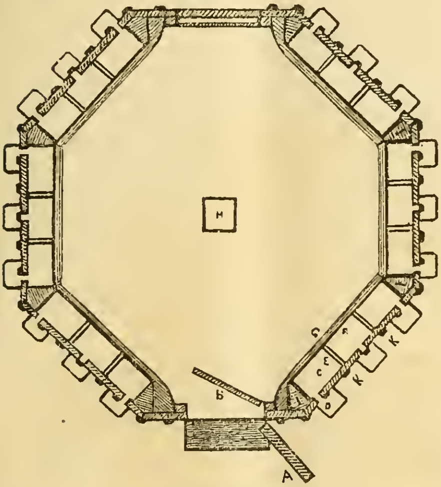


DIAGRAM OF INTERIOR.

To prevent the house from becoming damp, we need a ventitator H, in the centre of the ceiling, about a foot square, and we can also have a trap door in the centre of the floor to admit cool air from the cellar, during very hot weather. D, is the doorstep, and the entrances are shown through the walls, just by the battens. It will be observed that the middle hive on each side, has its entrance through, or rather under the batten; this is that the bees may have an additional mark for their own hive, for the entrances—2 in. auger holes—at the sides, are made at the right and left of the battens. This plan seems to work well, for we have lost fewer queens in the house apiary than from any of our out-door hives. The battens are also a shade darker in color, than the rest of the house; thus making them ornamental as well as useful. A light drab is a very pretty color for such a building.

Besides the hives we have just described on the shelf, we have precisely the same arrangement of them on the floor, or if preferred, raised on a little platform a couple of inches above the floor. In extracting, we can get along very well with the lower tier, by removing the sheet of glass, and shaking the bees on the floor close to their combs; with the upper ones, we find it best to stand on a chair or box, and shake them on top the frames close to the wall. If they scatter about, and threaten to run all over the walls and ceiling, take the next on the other side, until they get back, assisting them meanwhile with a little smoke. For comb honey, we work just as we do with the out-door hives.

Dr. Johann Dzierzon.—His Majesty, the German Emperor and King, has bestowed upon Dr. Dzierzon the Order of the Crown, 4th class, in consideration of his services in the elevation of bee-culture.

Convention of German and Austrian Bee-Culturists.—The 22nd *Wandersammlung Deutcher und Oesterreichischer Bienenwirthe* will be held in the Austrian city of Linz, on the Danube, Sept. 17 to 20, 1877. Foreign as well as native bee-culturists are cordially invited to be present and to exhibit bee products or apiarian implements. These conventions are often attended by 1,000 to 1,200 members.

☞ A. C. Atwood, Vanneck, Ontario, Canada, is an agent for The American Bee Journal, and will receive subscriptions, etc., at our regular rates.

☞ Some one has written us a postal card from Texas, complaining that the May and June numbers have not been received, but signed no name—leaving it impossible for us to attend to the business, till the name of the subscriber is sent.

☞ Demorest's Monthly Magazine of Fashions is on our table, and is filled to overflowing with choice matter valuable to the ladies of every household. It is universally acknowledged to be the model parlor magazine of America. Its subscription price is $3.15, but we club it with the A. B. J. and supply both for $4.50 a year.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

Explanatory.

When it became known that Moon's *Bee-World*—a Southern journal devoted to bee-culture—had ceased to have any further existence, several of the patrons and correspondents of that journal, whose names had through its columns become as familiar as household words, wrote us, making the request that we commence the publication of a journal which would be in the interest of Southern bee-keepers.

From an extensive correspondence with Mr. A. F. Moon, the owner and publisher of the *Bee World*, we had grave doubts whether the enterprise could be made to pay. To satisfy our minds on that point, before we would agree to commence the publication of such a journal, we concluded to, and did insert an advertisement in the several bee papers, calling on those disposed to encourage such an enterprise to forward us their names. A number have done so, to whom we return our sincere thanks, yet the number is not sufficient, even to justify the issuance of a specimen number. Among those who did send us their names, fully one-half reside in the Northern States, we have therefore decided to abandon the enterprise, and have made arrangements with the publisher of the AMERICAN BEE JOURNAL for a "Southern Department" in that journal. This department we will conduct to the best of our ability, and we hope to have the assistance of many Southern bee-keepers in our efforts. To those advanced in the art we would ask that you write us your experience, for the columns of THE AMERICAN BEE JOURNAL, that others may profit thereby; to those who are new beginners or wanting any *light*, we would say write us, propend all the questions you like, and so far as our information extends we will cheerfully impart it to you through these columns.

It is a delightful pastime to us to thus aid others. We did not engage in bee-culture for any pecuniary gain that might be derived from it, but solely for the recreation it affords, and a love to study the habits of this most useful of the insect creation; therefore we again say write us, don't be fearful of *boring* us, for we assure you, you will not. W. J. A.

◆

Since the ruling of the Postmaster General, the queen breeders in this locality have been sending queens by express. To-day, June 6th, the express agent decided to send no more queens unless the charges were prepaid on them. W. J. A.

Honey-Dew.

Honey-dew, as it is called, has existed in great abundance with us this spring, and our little busy insects have taken it in preference to the poplar and white clover blossoms. Quite a number of our friends have brought us in leaves containing it. It is found chiefly on the leaves of oak trees. Many have asked us for an explanation concerning it. We invariably replied that it was the product of the wood louse, which was doubted, but by a close inspection, myriads of these insects were found on the under-side of the leaves. They are so small that they are scarcely discoverable with the naked eye. Some express grave doubts as to its being the product of this insect, called *aphides*, and claim that they are present, in search of the dew.

Since writing the above, one of our friends who brought us in a specimen of the honey-dew, informed us that he had been making a close inspection of it, and has become thoroughly convinced that it is produced by the *aphides;* that he noticed on the leaves of a linn tree standing near an oak containing a large quantity of it; that there was none on the leaves of the linn only on that side next to the oak.

W. J. A.

◆

SENDING BEES BY MAIL.

Natchitoches, La., May 30, 1877.—"I have just received from Dr. Brown, Augusta, Ga., by mail, a queen. Why does not your P. M. mail them. I have just introduced her, and think she is O. K. Hope you will mail one shortly. She was only 5 or 6 days on the way; think one from you would come in less time. How long before I can raise queens from this one to be pure?"

J. McCOOK.

[We have had several queens from Dr. Brown ourselves, and like his strain of bees very well.

There are a number of postmasters who receive queens in the mail. Ours did so for two seasons, and frankly states, and so wrote to the Postmaster General, that they were entirely harmless in the mail. The fact of some postmasters receiving and forwarding queens, and ours refusing to do so, places us in an awkward position, and gives others an advantage over us. We however succeeded in getting the route agent to receive one in the mail addressed to you, with the positive assurance that he would not receive any more.

You can commence rearing queens from the one you received of Dr. Brown in ten days after introducing her. The purity of the queens you rear from her will depend on her purity. If she proves to be purely fertilized, then the queens reared from her will also be pure; but may, and in all probability will, mate with black drones, the progeny will then be hybrids. After you have hybridized all your stocks, remove your queens and raise others and you will soon have all your colonies purely Italianized.—W. J. A.]

COVERING FOR FRAMES.

Chattanooga, Tenn., June 7,1877.—"Again I ask your counsel. As you know my hives are (for Gallup frames) 12x12x18 inside measure; there is a strip nailed 1 inch all round from top, and a cap fits over the top and rests on said strip. The cap is 6 inches deep above the frames when in place. Now I wish you would tell me what is the most economical and yet sufficient covering on top of the frames? What do you cover up your frames with?" S. C. DODGE.

[We have tried the honey board, quilts, sheet tin, domestic—in fact everything we have heard of, except straw mats. This year it occured to us to try enameled oil duck. We did so on a few hives at first, and were so pleased with it that we now have it on all our hives. The bees do not cut through it nor stick it so tight with propolis but that it is easily removed. There is a great difficulty in removing propolis from plain duck and other substances, but with the enameled oil cloth we have no difficulty in this respect whatever. A few minutes exposure to the sun will remove it entirely. This spring being our first trial of it, we cannot say how it will answer for wintering, but fear it will be too close. I shall try it as an experiment on a few hives. —W. J. A.]

Our Honey.

The main honey crop of our Northern friends, and that most highly prized by them, is gathered from white clover. We have seen many beautiful specimens of this honey. Friend Muth sent us, this spring, one dozen 1-℔ jars of it. We had hoped to secure quite a yield ot it in our own apiaries this year, but were unable to do so. Its bloom has existed and still exists in great profusion with us, but with its early blooming we also had the black locust, which is very rich in its secretion of honey, and our bees took it in preference, and no sooner had the blooms of the locust fallen, when our poplar (tulip) trees came in bloom and again they took it in preference. We have extracted a considerable amount of honey, but it is very dark, being from the poplar and honey-dew. Our linn (basswood) trees are just commencing (June 4th) to bloom. This is our principal dependence for honey. We are now engaging in extracting the honey from all our hives, in order to keep the linn honey to itself.

W. J. A.

Foreign Notes,

GLEANED BY FRANK BENTON.

REMEDY FOR STINGS.—M. Griffon says, after describing in *L'Apiculteur* a hive designed by its inventor to enable one to avoid stings, "This, even if true, amounts to nothing with the practical apiarist, who, besides not fearing the stings of his bees, has other means to guarantee safety. If, notwithstanding his precautions, he is stung, he has at hand the simplest and most efficacious remedy; that is, simply moisten many times with saliva the wound made by the sting, which should be removed as soon as possible. I have tried all the means recommended—alkalies and all other liquids, juices of herbs, etc.—but none of them have succeeded as well with me as the first one mentioned, simple as it is."

DOES TAKING THE HONEY FROM THE PLANT INJURE IT?—Some horticulturists complain that flowers visited by bees wither more rapidly than those protected from their contact. There is nothing strange about this, for it is simply the result of the fecundation of the stigma of the plant visited by the bee. But certain gardeners claim that by removing the honey or juice of the nectaries of flowers, bees hinder the complete development of the fertilizing organs of plants. This is a great mistake; and M. Adrien de Jussieu says, in his *Cours Elementaire de Botanique:* "One can remove the nectaries, or at least their contents, without injury to the fertility of the flower, and without retarding the maturity of the fruit." The bee injures the fruit no more than the flowers.—*Aug. Pillain, in L'Apiculteur.*

MR. E. HILBERT, AND THE CYPRIAN BEE.—M. Emile Hilbert, of Maciejewo, is one of the many learned and enthuiastic apiarists to be found in Germany. He is a patient observer, who permits no obstacle to stop his progress. This is proved by his study of foul brood, which has led him to the discovery of a remedy for this terrible affection. He is particularly enthusiastic as regards foreign bees—better races, and believes in the improvement of our native bees by crossing. To the exhibition of insects he sent the Cyprian bee, which had not been introduced in France. His little colony of Cyprians, even more marked in character than the Italians, is eagerly sought after. The committee accorded M. Hilbert an *abeille d'honneur* (a bee honor) for his introduction of the Cyprian bee and for his investigations concerning foul-brood.—*Report concerning Apiculture at the Exhibition of Insects in* 1876.

ADULTERATION OF HONEY.—The following was read before the *Societe d'Apiculteur de la Somme:* The substances which serve for the adulteration of honey are of two kinds—those soluable in water, as for example, the sugar of glucose; and those which are insoluable, such as starch, raw and parched flours, etc.

Sugar of glucose cannot be recognized positively except by a chemical analysis; nevertheless, persons who are accustomed to the use of honey recognize it quite readily, because the sedimentary sugar hinders the forming of the elongated crystals which the honey assumes and gives it rather an acid taste.

For the detection of substances insoluble in cold water it is only necessary to disolve 30 grammes of honey in 100 grammes of cold water. The honey disolves completely when it contains no foreign matter; if otherwise, the insoluble substances will fall to the bottom after standing an half hour; the liquid is then carefully decanted, and if one wishes to know the nature of the matter added to the honey—whether flour or sand—the residue is placed in a porcelain vessel, with twice its weight of water, and then boiled. If the substance is flour there will be a kind of starch formed in a few moments; if sand is present it will remain at the bottom of the vessel.—*M. Dermigny, Pharmacist.*

What can be Done to Counteract the Production of Drones in a Colony?—At the Breslau *Wanderversammlung*, last fall, the discussion of this question brought forth the following remarks from Herr Hildebrand: "As soon as an unusual production of drones occurs, one should ascertain whether the cause is queenlessness or a worthless condition of the queen. In the latter case the queen is to be removed and the drone brood replaced by combs containing worker eggs. In order to prevent any such case arising, an exact record of the age of the queens should be kept, for thus the apiarist is able to know when queens are likely to become worthless from age, and can replace them by young ones."

The use of Robber Bees.—"Use!" does the thoughtful reader exclain. And yet it is true that robber bees are of some use. They perform, as it were, the work of local police; for where they penetrate the colonies are not in order; there the weak, starving, or queenless colonies, or defective hives are to be found; or the bee-keeper is himself careless in the handling of honey or other sweets. The first thing should be a thorough revision of the apiary; if the opening of hives be avoided, weak or queenless colonies united, the entrances contracted, gaping crevices stopped up, and all traces of honey carefully wiped away, the robbing will soon cease.—*Schlesische Imker.*

According to *L'Apiculteur*, the number of entries already made for the International Exposition of 1878 are more than 30,000 from France alone, and hundreds of apiculturists will exhibit their products.

There is an old German name for the bee, which means, "she that kisseth flowers."

Foul Brood Cured.—In 1876, 80 out of 120 colonies owned by Count Rudolph Kolowrat, of Hroby, Bohemia, were affected with foul brood. By the use of salicylic acid nearly all were saved.

Strong stocks consume little more in in winter than weak ones, but they amass more in summer.—*M. Gelieu.*

The worst enemy of the bee is the ignorant bee-keeper; let him learn and his complaints will cease.—*Herr F. Bastian.*

The German Prince, Frederick Karl, possesses an apiary at the Castle of Glienike, near Potsdam.

Artificial Combs.—At the convention held in Breslau, last Sept., Dr. Dzierzon said: "It is impracticable to use artificial combs where only immovable combs are used; in bar hives their use is not advisable; but in frame hives they can be used to great advantage. Whenever there is a lack of good worker comb, and where the same can only be obtained with difficulty, or not at all, by box-hive bee-keepers, it is the best plan to obtain and use artificial combs, for the bees more easily and quickly complete such combs than they build entirely new ones." Herr Guehler recommended very highly the use of comb foundations in bar hives. Herr Hilbert opposed the pruning of combs in the spring, and claimed that bees secrete no wax if combs are furnished them.

King George I, of Greece has recently busied himself in the preparation of a book on the Hymettus or Cecropian bees, which will be published shortly. This royal apiculturist possesses a collection of ninety kinds of honey which he has collected from various countries.

The editors of *Le Rucher* (Bordeaux, France), MM. Drory and Sourbe, have issued a work entitled, "*Manuel d'Apiculteur Mobiliste*," and a bee-keeper of Loraine devotes six pages in *L'Apiculteur* to its criticism, and promises to continue as soon as he receives additional pages of the work. He notes 17 statements which he considers grave errors. As an example, here is error No. 10—MM. Drory and Sourbe say: "The queen first leaves her hive from 2 to 4 days after hatching, if the weather is pleasant, for her nuptial flight." The critic says of this statement: "An apiculturist up with the times in apiarian science would not say, to-day, that a queen goes out for fecundation on the second to the fourth day after hatching. She does not desire impregnation until the seventh day of her life —rarely before."

Increasing Colonies.—Herr Cantor Bruno spoke as follows before the Ninth Convention of the Hanoverian bee-keepers: "It is not possible to give universal rules for the increasing of colonies, applicable to all localities and harvests, yet the correctness of what is contained in the following three sentences is admitted:

"1. In localities furnishing only a spring harvest there should be little increase.

"2. In localities with a longer, yet somewhat light harvest, the increase should be a little above 1: 2.

"3. Where there is an early and late harvest the proportion for principal swarming time may be 1: 2½.

"Beginners in bee-culture, striving to increase their stocks rapidly, easily fall into the error of weakening them; on the contrary, an experienced bee-keeper retains his colonies in strong condition, even though the number be not so great. Besides these points, attention should be given to the character and development of the stock, to the time of swarming, to the size of the hives, whether furnished with combs or not, etc. The increase of colonies should be made with rational, *i.e.*, judicious regard to the surrounding conditions; and, in favorable years, may exceed the proportions just mentioned, while in poor seasons it must remain behind them."

Correspondence.

For the American Bee Journal.

Which Frame?

A beginner in bee-keeping must depend for guidance on the testimony of those who have experience. If this testimony was always harmonious the beginner's path would be comparatively easy. He would have only to learn this testimony and follow it. But unfortunately for his ease and peace of mind the testimony of the most experienced and succcessful bee-keepers is often conflicting on some important points. When the doctors disagree in this perplexing way the cautious and thoughtful beginner must weigh the testimony on all sides, consider his own resources, determine as nearly as possible what he wants to accomplish, then decide for himself what course he will take, knowing that whatever decision he may make will be pronounced unwise by some whose success entitles them to speak.

The kind of hive with which one begins is an important matter. The beginner wants a hive which is good for brood-rearing, good for comb honey, good for extracted honey, good for the health and prosperity of the bees the year round, and which can be manipulated with the smallest possible trouble and expense. If there is no hive that combines all these excellencies, he wants that hive that has most of them. Of course, this being his aim, he asks at once what hives are used or were used by the men who have had marked success in bee-keeping? What hive did Grimm use? What hives are used by Dadant, Doolittle, Harbison, and Hetherington?

In answering these questions, one point is settled at once and without difficulty. All bee-keepers in our day who have had a worthy success use a movable-frame hive. Upon this point the testimony is, in effect, unanimous. The few who advocate old-time box-hives may be considered only the exception that proves the rule. But having decided upon a movable-frame hive the beginner's next question, which frame shall I use? perplexes him. Here the great doctors disagree. The Langstroth, Quinby, Gallup, and Harbison frames are all used with eminent success, and the beginner must decide which is best for him.

In the perplexity of choosing he has at least one comfort. As the eminent bee-keepers use different frames it is clear that a fair degree of success may be achieved with any one of the frames, hence choosing which he may, the beginner may feel that his frame does not necessarily mean failure. Rather, with good management, it means success.

An enthusiastic friend having interested me in bee-keeping, I determined to begin with five stands. As soon as I began to inquire about frames I found myself compelled to choose one from the several used by the most successful bee-keepers. I asked myself, "What do you want to do?" It did not take long to reply that I wanted, in the first place, an avocation that would take me into the fresh air and sunlight, and give me the physical exercise that would keep me in nerve for my regular vocation. Secondly, I wanted a recreation so absorbing as to take the mind entirely from my customary work, and occupy it fully with something entirely new and different. And, thirdly, I wanted to get honey enough for the babies, and if there should be a few pounds to send to the grocer, I should not seriously object.

Then I asked, "How do you want to do it?" The answer came pretty sharply. I want to do it myself. I want to do all the work, except cut out the material for the hives. I do not want to hire any help to carry hives in and out of the cellar, or for any other purpose.

Having only average phpsical strength, it at once became clear that the hive I should use must not be large, and must be made as plain and light as possible. Which, now, is the smallest hive that, in the hands of an intelligent man, has given good results? The Gallup.

Having reached this point, I wrote to Prof. Cook, asking him if any new light had come to him, as to the best frame, since he wrote his excellent "Manual for the Apiary." He replied: "I prefer the hive I describe in the "Manual" to any other. It is a Gallup frame, the one used by Doolittle. I prefer it for these reasons: (1) It can be used for nuclei, and save making small ones on purpose for this. (2) It can be made more compact, and so save heat in fall and spring. (3) It is easy to handle. (4) It does not trouble by comb falling out. I have tried all sizes and find this best."

This letter led me to a further investigation as to the Gallup frame. I found that a hive made to contain 12 Gallup frames would contain nearly as many square inches of comb as a 10-frame Langstroth hive; that they could be easily worked single or two-story, for comb or extracted honey; that they were simple in structure, simple in management, easily carried into the cellar, and easily prepared for shipping to remote points.

Then as to honey and bees, the dollars and cents question, some who use the Gallup frame have been among the most striking instances of success in bee-keeping. It seemed, then, that for my purpose as mentioned above—to keep a few stands of bees for exercise and recreation, and honey for my family, doing all the work myself—the 12-frame Gallup hive was the best.

The 12-frame Gallup hive was adopted and procured. My first work in bee-keeping was to transfer my five swarms into the new hives, work which was accomplished successfully—getting a few stings by way of discipline. And to-day in their plain little houses, new and neat, the bees are doing as well as can be expected. O. CLUTE.

Keokuk, Iowa, May 25, 1877.

Relative Merits of Italian and Black Bees.

READ BEFORE THE MICH. CONVENTION.

Fellow Bee-Keepers:—It was not without some degree of hesitancy that I prepared this paper, with the intention of reading it before this convention. It is upon a subject that I consider of paramount importance to all honey producers; and I have reason to believe that every enterprising bee-keeper will in some measure share with me in this opinion.

I hesitated, first, because I am a mere infant in this Society, not having been a member until this year, and never before this season having had an opportunity to attend one of its meetings. In the second place, I hesitated because I am aware the conclusions at which I have arrived will clash more or less with the opinions held by some of my brother bee-keepers. And thirdly, I hesitated somewhat to express my full convictions on the relative merits of Italian and black bees on grounds of self interest. I have seen with others that there were dollars and cents connected with raising and selling at fancy prices the beautiful golden-banded queens, as also with the sale of full stocks of the highly recommended.

But I have become fully convinced that the great superiority claimed for Italian over black bees is purely visionary and fanciful. My motto is, let the truth come even if it does sear and burn some of the pet theories and lessen the opportunities for swindling the uninitiated and inexperienced ones.

In the Agricultural Report for 1875 one of our agricultural editors is strongly reprimanded for making the statement that Italians are no better than black bees, and he (the editor) is represented as standing alone on this question. If such was the fact at that time I wish it to be understood in the future that there is at least one more on that side, and I am quite confident from what I know of the feeling that exists among bee-keepers that the time is not far distant when pure black bees will be in better demand than the beautiful yellow bees are at present.

In the above named agricultural report, 11 points of superiority are claimed for Italians, as follows: 1—They have longer tongues or ligulas. 2—They are more active. 3—They work earlier and later. 4—They are better to protect their hives against robbers. 5—They are almost moth-proof. 6—The queens are more prolific. 7—Brood raising commences earlier. 8—The queens are more easily found. 9—The bees adhere to the combs better. 10—They are far less apt to rob other hives. 11—They are more amiable.

These I think are a fair sample of points of superiority claimed by Italian queen raisers in general. As the first three points relate to honey gathering ability, I will group them together and ask the following question, viz: What advantage is there to be gained by having bees with longer tongues, greater activity and earlier and later work, if, in fact, they do not gather more honey in the same length of time? My answer to this question you will get from my experience which I shall relate further on.

On the 4th, 5th, and 10th points I will say my experience proves to me that no prudent bee-keeper will ever have trouble with robbers or moths. And again on the 6th point, what does it amount to, even if the queen is more prolific, if in practice the brood chamber does not actually contain more brood? On the 7th point I would say that my experience furnishes no evidence that brood raising commences earlier with Italians than with blacks that have had the same care. The 8th and 9th points may be considered as one, since the queen is more easily found, because the bees adhere to the combs better, and I think that this, together with the claim that the Italians are more amiable, is true; and it leaves the matter in this way: Italians are superior to black bees only in two points—the queens are more easily found and the bees are more amiable, and therefore more easily handled.

I wish now to state in what respects I consider black bees superior to Italians. I will generalize them under four heads, as follows:

1. They are far better to store box honey, far out-doing Italians in quality as well as in storing it in much better shape.
2. They are hardier, will stand the winter better, and are not so liable to be reduced by spring dwindling.
3. They are better comb builders. They build straighter; make less drone comb, and are not nearly so apt to connect the frames by small pieces of comb and bits of wax.
4. They are more easily controlled in the practice of artificial swarming, which to every professional bee-keeper is all essential.

I have arrived at these conclusions through experience and very careful observations,and my experience is being confirmed by that of other careful observers. In explanation of my second point I would say that I am not so certain that black bees winter better so far as the body of winter is concerned, but I am positively sure they came through the spring better; and every practical bee-keeper will agree with me that this is a very important period in wintering bees. Perhaps the dwindling of Italians in spring may be due to flying out when the weather is too cold, thereby becoming chilled and unable to return to the hives. I have had considerable experience with Italian and black bees for the last 5 years, but have only had an opportunity to give them a fair test during the last two years, which is as follows:

March 25, 1875, I purchased six swarms of bees. They had been taken out of winter quarters only a short time before, and seemed all to be in about the same condition. Of these one colony was pure black bees, three were hybrids, and two were pure Italians. By the last of April there was a marked difference in their condition. The blacks were strong, the hybrids were next in strength, while the Italians were reduced to a mere handful in either colony.

May 1st, I sold a swarm to one of my neighbors. I offered him one of the Italians for $10. After looking them over he wanted the price of my black swarm, and to save it I put on a price of $25; and even at that price he hesitated somewhat before making a choice of the Italian.

In the spring of 1876 I sold my apiary in Lenawee County, removed to Northville, Wayne County, and formed a partnership with Mr. D. F. Griswold. We immediately purchased 60 colonies of bees, of which 33 were pure blacks, and 27 Italians. Again, all seemed to be in about the same condition. The Italians had fine pedigrees. They could be traced back as daughters, grand-daughters, sisters, etc., to queens from Dadant, Argo, Novice, etc. It was all very nice to have bees with pedigrees; but it wasn't quite so nice to find the Italians rapidly decreasing from the last of March to the first of May. About the latter date we transferred all our bees, the blacks from the old box hives to hives with movable-frames, the Italians from movable-frames to frames of a different shape. Again we found a decided difference between the condition of blacks and Italians. The blacks averaged much stronger and had a much larger amount of brood than the Italians. But I will pass these things by, as of minor importance, and go on to the main point for which all bees are supposed to kept, viz.: the largest possible amount of pure honey in the most salable shape.

When summer came and the trees were laden with bloom, the meadows carpeted with rich white clover, and each flower well stored with nectar, then it was that I became completely disgusted with Italian bees. Our blacks were getting on in the most satisfactory manner, building and storing a whole section in a single day, while I found it impossible to induce Italians to enter the boxes at all. But instead they were filling the brood chamber below, and, wherever there was any possible space, building small additions of comb; meanwhile they were trying to swarm with the wildest confusion, and swarm they did with but a small amount of bees, and without a single queen cell. Then it was I stocked our nuclei with queen cells from our pure and most prolific blacks, and whenever I had occasion to introduce queen cells I did so from black stock. The result is that nearly all our increase for last year is black bees.

My father, a close observer, a practical and successful bee-keeper, with many experiments, and with a keen eye to the interests of his apiary, has had similar experience and has arrived at the same conclusions.

There are those to whom I think Italians might be recommended. To beginners, who are unaccustomed to handling bees; to persons of nervous temperament, to those who are by nature timid; and to gentlemen and ladies who keep bees for pleasure rather than profit, I would recommend pure Italians, the purer the better, for I find the lighter the color the more docile the bee. But to all who mean business, and wish to produce the largest possible amount of salable honey, I would recommend black bees, the queens to be bred from the most prolific mothers, the breeder having always in mind the great law of natural selection, and, following the example of our universal mother —nature—permiting only "the survival of the fittest."

Finally I do not present these views to raise needless controversy, but rather that the truth may be more fully brought out. The facts that I have set forth have impressed themselves upon my mind, and I believe them to be worthy the attention of all honey-producing bee-keepers. And to the end that we may get at the truth of this matter I am anxious to co-operate with all apiculturists who are laboring for the highest triumph of apicultural science.

W. L. PORTER.

[Following this was a very lively discussion. No one present fully concurred with the writer of the paper.

The president said while Mr. Porter's premises were correct, his conclusions might not be so. While black bees are the best to go into boxes, that is not a conclusive argument in their favor, for honey in boxes is not always as desirable as honey in small frames. Again, the Italian bees may dwindle more rapidly in the spring, owing to their more active habits—qualities really in their favor. But the apiarist should prevent early spring flights and thus remove the difficulty.

An exchange justly remarks: Mr. Dzierzon, the man who stands highest among the great bee-masters of Europe, says, after 25 years' experience with Italian bees, that in Germany their importation has greatly increased the returns from the culture of bees and that he finds them more beautiful, more gentle, more watchful, more prolific, and possessed of greater diligence than the common bees. Again, at a recent bee-keepers' convention held at Breslau—one of those great and enthusiastic meetings for which the Germans are so celebrated—the conclusion was reached that in poor seasons the Italian bees show themselves superior to all other races. Besides the common and Italian bees, the German bee-culturists have bred the Cyprians, the Dalmatians, the Smyrnians, the Herzegovinins, the Egyptians, and the Carnolian, Krainer, and heath bees.—ED.]

For the American Bee Journal.

My Bees.

It is hardly safe to make a report for the year before the middle of May when all trouble from "springing" is over. I started the spring of 1876 with 34 colonies, took 1600 lbs. of honey, mostly extracted, and increased to 98—on hand the middle of May, 1877. To enter more into detail, I took 1700 lbs. of honey but fed back 100 lbs. of comb honey in frames this spring. I increased to 100, but one of the latest did not succeed in raising a queen, or rather it was lost on its wedding trip. As an experiment, I put this hive in the cellar with a small number of bees and they were very properly all dead by spring. This really made the number of colonies put into winter quarters at 99, and these 99 came out alive. One of them died after bringing out, so that I have lost only one out of the 99, and have 98 to start the season with. One of these I found with a young queen unfertile, but I gave it brood and it has now raised another young queen about ready to lay. As it had plenty of bees, I count upon it as a good colony.

On Nov. 15th, Richard, the hired man, commenced carrying in the hives and taking in a few each evening and morning had them all in the cellar by Nov. 21st, where they remained till soft maples were in blossom—April 10—and were all out by April 12, after nearly 5 months confinement. For ventilating the cellar, a chimney of brick and stone ran from the ground to the top of the house, and a hole in the chimney near the ceiling of the cellar received a stove-pipe which ran down to the ground. This made plenty of draft, but in the extreme cold weather of December it cooled off the cellar too much. One day I came home and found that my wife had put a parlor stove down cellar, and through the rest of the winter I built a small fire in it every few days, keeping the thermometer most of the time at about 38°, ranging from 33° to 46°. I suppose it would be better to keep steadily at about 44°. Still I should be well satisfied if I could winter always as well. Not the slightest suspicion of mould did I find on a single comb, except in the hive which had the few queenless bees. For the ventilation of each hive I left a space open at the back of each quilt or rather sheet, a space of ¼ or ½ in. The entrances to the hives were left entirely open.

I don't feel confident that I know why I wintered so successfully, scarcely any bees dying and no spring dwindling, but there are a few points I think I should strive for:

First.—Avoid all *late* feeding, or better still, avoid all fall feeding by letting them keep plenty of sealed honey just where they placed it. I feed not a drop of anything in the fall.

Second.—Keep them well aired all winter and at as even a temperature as possible, not going out of the range of 35° to 45°.

Third.—Keep them in, till danger from springing is past.

At present writing, the last of May, they are doing nicely, and I have got 2,000 of Novice's sections and 100 ℔s of foundation, and will try for a ton of comb honey in these sections, besides working the larger part for extracted honey.

May 23, 1877. B. LUNDERER.

For the American Bee Journal.

Jefferson Co., Ind., B. K. Association.

The bee-keepers of Jefferson Co., Ind., met at the Court House at Madison, on May 19th, and organized a bee-keepers' association, with Abjah Wright as president; P. R. Vernon, vice-president; H. C. White, treasurer; and A. W. Smith, sec'y. After a few short but interesting addresses, several important subjects were selected, and given to as many members for discussion at the next meeting, to be held on June 30th. Much interest was manifested on the part of those in attendance. THE AMERICAN BEE JOURNAL is growing in favor here. All wish it success.

ALLEN W. SMITH, *Sec.*

For the American Bee Journal.

Cheap Queens.

That no one may be misled by our communication—"Dollar Queens"—in the June number, we will give our plan of operation in queen rearing.

Having selected the queen we wish to breed from, as all queens are not equally prolific and satisfactory, we commence early in the season to encourage brood rearing by feeding, and build up by giving frames of brood from such colonies we wish kept back and retarded in drone rearing. We use the Langstroth, two-story hive, 10 frames in lower and 11 in upper story. By keeping a good supply of honey in the hive, with a favorable spring, by the middle or last of April they will begin preparations for swarming by constructing numerous queen cells, and the first, warm, sun-shiny day the old queen will leave the hive with a swarm.

Wishing to have the cells well nursed and cared for, we remove the queen and return the swarm from whence they came. The hive being now "chock full" of bees, and having the swarming fever, the first queen hatched will invariably come out with a swarm. In the brood chamber, the lower story, to give more room, one of the frames containing no queen cell we remove,leaving only 9. We do this, because by leaving in the whole 10 frames, the sides and ends of many of the cells are attached to combs on adjoining frames, and in removing the frame, the cells are destroyed. We have frequently had frames to contain upwards of 20 cells, but this is not common.

By actual inspection of the interior, or by listening for the piping of the young queens before being permitted to emerge from their cells, we break up the colony into nuclei. Being so much trouble to feed, etc., we discarded several years since the nuclei hives with small frames, and use the standard Langstroth altogether in nuclei. It saves labor and is economical in other respects.

We generally form from the broken-up colony 10 nuclei, but if desirable, have bees and cells frequently for twice that number. We leave the old hive on its own stand, and as it will catch nearly all the old bees, the youngest and uncapped larvæ are left in it, with such cells as we have placed in cages, etc.

That each nuclei may retain the bees given it, they are removed to the cellar or a dark room for 36 hours, when they are removed to the apiary setting in clusters of 4, with their backs together, and fronting N., S., E., and W., respectively; some 3 ft. off, others are similarly placed, fronting N.E., S.E., N.W., and S.W.

We try to avoid all natural swarming at this time.as the young queens are about the time of day natural swarms issue, out on their bridal excursions and frequently join the swarm.

By the above cause, if any better queens are reared from cells constructed of choice and not of necessity, we have them. If no better, we have pursued the most economical plan all things considered, and our object attained.

Pretty much the same course is pursued in drone rearing. Build up strong colonies and insert frames of drone comb between the brood, and as soon as they are deposited full of eggs, remove them to colonies that do not produce as desirable drones, and give other frames in their stead.

When the weather is warm and plenty of flowers secreting nectar, even weak colonies will rear drones.

When everything is favorable we sometimes remove the queen, and if on the 9th day we have a place for all the cells, we remove all, and like some poultry breeders give frames of eggs and very young larvæ and "put them to setting again." They will then construct more cells, and oftener than otherwise, double their first number.

Plenty of honey in the hive, plenty of old and young bees, the gathering and storing of honey in abundance, and warm weather, are the requisites for successful queen rearing. But to those who are unacquainted with the business and think that from $100 to $1,000 can be secured with no trouble, to such we will add a word from Burns' address to a young friend:

> "For care and trouble set your thought,
>   E'en when your end's attained;
> And a' your views may come to nought,
>   When ev'ry nerve is strained."

W. P. HENDERSON.
Murfreesboro, Tenn., June 4, 1877.

For the American Bee Journal.

Building Straight Comb.

I will give you my plan. When you part a swarm, place the frames the proper distances apart and put the hive where you desire it to stay; raise the back of the hive about 4 inches higher than the front, and they will follow the comb guide, building straight.

W. T. SEARS.
Warren Co., Ky.

For the American Bee Journal.

Dollar Queens.

I am not the only bee-keeper who thinks that the raising of dollar queens does not pay. I have received letters from several bee-keepers, who indorse my views. The last of these letters came from a well known queen breeder of Tennessee—just the State of one of my opponenis, Mr. Henderson.

Out of the first twenty sellers of dollar queens, how many continue the business to-day? Only 2 or 3. Have the 17 or 18 others become sick of the business or found that there was too little profit?

The late Adam Grimm thought that queen raising was unprofitable (*Gleanings*, Dec., 1876, p. 303); yet he used to sell his warranted queens at $3 each, and he was in good condition to raise pure queens, having introduced 40 imported queens into his apiary.

In answer to my article, Mr. Henderson says: "We purchase 50 colonies of Mrs. Grimm, who advertises them at $6.50 each." Of course, for his figures, Mr. H. chooses the smallest price advertised. But he forgets that the colonies of Mrs. G. are not sold with safe arrival guaranteed, and that the railroad smashers will kill at least 3 or 4 of these colonies. Now the express companies do not transport bees for nothing. The price of transportation from Jefferson to Murfreesboro, Tenn., will be more than $3 per colony; for they run through two express lines. They cannot be safely sent by freight—none would arrive alive.

It seems also that in Tennessee, farmers are unlike those in Illinois, for here we cannot buy box hives in spring, with 25 or 30 lbs. of honey and strong colony for $2 each. Such hives cannot be bought here for less than $5 or $6. If we figure these differences we find: 3 or 4 colonies killed by the express company, $10; transportation, $150; difference on the price of 12 box hives, $36; interest on our outlay (forgotton by Mr. H.), $50; total $246.

Now the hives of Mrs. G. contain only 8 frames instead of 10, as figured by Mr. H., and I have experienced that you cannot find 6 Langstroth combs in the largest box hive. So you have to deduct about one-fifth of the number of 200 nuclei indicated by Mr. H.; his production of queens being reduced to 160, instead of 200, on every batch of queens; or 3 times 40, 120 queens to be deducted from the whole number produced. If we add the price of these 120 queens to the amount of surplus expenses, we find $366 to deduct, and the net profit instead of amounting to $531, is reduced to $216.

No doubt, although curtailed, this profit would be handsome for 2 month's work; but there are several other items which are not taken in account and which will greatly lessen the net profit. For instance: can, in Tennessee, this raising of queens succeed in April? I think not, for I have several letters showing that honey was scarce in Tennessee, during April and May, this year. In the same number of the JOURNAL, page 206, Mr. T. F. Bingham writes from Edgefield Junction, May 7th: "Bees have not gathered enough to support their brood." Now lack of honey in the fields means need of feeding the nuclei, and of course robbing.

In the middle States we cannot begin sending queens before June 1st. It is not safe to send queens early; they are killed by frost, as Mr. Andrews experienced last year.

Generally, nuclei cannot gather a living; but Mr. H. forgets to put in account the expense of feeding them. Now we cannot send our queens as soon as they are ready. We have to wait for the demand, and our nuclei are left with their queens till we find purchasers. Then our queen business lasts from June to Oct., till it is too late to rebuild our ruined colonies.

No dollar-queen breeders raise them "by steam power," as Mr. H. proposes to do. Instead of using 50 tip-top tested queens, they use only 1 or 2 imported or selected queens. But in the opinion of Mr. H., these tip-top queens are as good, if not better, than imported ones. I know of about half-a-dozen bee-breeders who are of the same opinion, while most bee-keepers prefer imported queens, and are willing to pay for them.

Comparing bees with sheep or chickens will not do. We can choose the male for all these animals, but we cannot control the mating of our queens. Hence the necessity of recurring to new pure blood; and this necessity is so much felt by bee-keepers that 16 out of 20 of those who advertise queens use imported ones or queens nearly related to imported. Now what has shocked Mr. H.. and especially another opponent who signs his article "A Reader and Dealer," is my assertion that some of the dollar queens are poor.

I do not wish to be offensive to my brother bee-breeders by the following questions:

1. Let us suppose a young bee-keeper living in a township where there are none but black bees, beginning to sell dollar queens. How many of these queens will be purely mated, if the dealer has only a few colonies?

2. Let us suppose that instead of raising his queens in whole colonies, for the first part at least of their raising, he starts them in nuclei hives. How many of his queens will be worth their small price?

3. Let us suppose a dishonest man in this dollar queen business. I know that there

are no such men among bee-breeders, but it is only a hypothesis. Our dishonest man will send, for $1 each, all his *tested* queens, and the buyers will get only scrub or hybrid queens.

Don't you see that with this unwarranted queen business you open the door to dishonesty? It would be a long time before such frauds could be detected; nobody complaining, as the queens are not warranted.

"Reader and Dealer" asks if my $7 imported queens are as good as when I used to sell them at $15? I think that my $7 ones are better, for they arrived in better health. When I was compelled to sell them so dear, too dear for the buyer, too cheap for me, for some of the queens delivered at $15 cost me $30, and hives $60 each. These dear queens were poorer than the $7 ones, for most of them were sick on their arrival with their health more or less impaired.

Both of my opponents think that I have written my article to help my business of imported queens. They don't consider that if my article has any influence, it will be in favor of the dealer in warranted or tested queens rather than imported. A bee-keeper who cannot pay as much as $3 for a tested queen, will not be likely to buy an imported one worth twice that price.

Both of my opponents seem to think that $1 queens are as good, if not better, than imported ones. As Adam Grimm made a handsome profit with bees, I will quote him once more. On May 25, 1875, he wrote me that, with the old race of Italian bees his honey crop was light; but that since he had imported extensively he had loads of honey if any could be found in the fields." He ordered 2 imported queens to infuse some new imported blood in his apiary. Such testimony will counterbalance a great many assertions of bee-keepers who have never tested imported queens in comparison with the home-bred ones of 40 generations of in-and-in breeding.

When the time for rest arrives for me, I shall recollect with pleasure that though importing may be abandoned as a losing business, I have persevered in spite of the losses, difficulties, and oppositions coming from every side; and that I was at last rewarded by seeing the business becoming profitable and extending itself enough to be practised by others, and that the number of my sales steadily increased year by year.

Such results prove either that most of the American bee-keepers are void of common sense, since they buy queens at $7 each, when unwarranted ones cost only $1; or that the imported queens have some qualities that the generality of home-bred ones do not possess.

I beg the reader to forgive these praises of imported queens. I should not have thus extolled their merits, had not my opponents changed the battle ground by attacking the imported to defend their cheap queens.

CH. DADANT.

Hamilton, Ill., June 10, 1877.

For the American Bee Journal.

A few more Straws.

Mr. Bingham writes me that I was mistaken in regard to his writing me that there was honey enough upon the market to last another year. My father wrote just this, home to me, while Mr. B. stated that much was being carried over, where he had traveled, which would probably effect the early market. If we have a great deal of work and numerous letters, we are apt to write hastily and depend upon our memory rather than looking over back correspondence to quote from, as we should do. My father's letters arriving in the same mail with Mr. B's, gave the impression as stated in my article in June number.

Mr. Editor, the "questions and answers" in the JOURNAL are of much value to all of us. To the old veterans as well as the new apiarists. A fool may ask a question a wise man cannot answer; two heads are better than one, etc., goes to prove it. Who will answer the following questions from *experience*, no opinions wanted, I have some of them on hand:

1. Will bees cut through duck cloth?
2. Will they cut through stock A grain-bag?
3. If not, why wouldn't a good way to feed be to raise the board covers and pour thin liquid sweets on top of the duck?
4. Would the bees not take the thin warm liquid through the meshes (it would most drip through, if not quite) but not gnaw through?
5. What makes certain worker bees go over the combs, or run about the entrance of the hive shivering or shaking themselves?

I have got a lot more questions, but will reserve them till next month.

Novice lets us down easy on to a piece of foundation. I knew something was going to make bees and honey cheap.

I made (original) the first curved-pointed honey knife in June, 1871. No doubt many others did the same. The sunken places in the combs suggested it to me, so I bent up Ma's old, worn thin, case knife. I use this case knife yet in preference to Peabody's or Winder's old or new style, all of which are in the rack side by side. Who can furnish a better one?

I am not only right, but I'll bet a cent, I am on the popular side of the smoker question, and that Novice is on the other (as usual), and that the bee-keepers are going to leave him out in the cold. He will crawl in at such a small hole, and so quietly, by-and-by, that we'll forget he ever put the Quinby smoker above Bingham's.

Mr. B. showed me that many times an extra smoker did the work of a man in the apiary, so I bought four, two for each apiary. I think more of them than of any other fixture I have, and I am confident that time will bear me out consistant and correct.

For once I will lay aside my usual morality, and bet Mr. Ch. Dadant that those dollar queens and 75 cent bee hives are worth the price, just about. Perhaps there are queens and hives worth more.

The bleached comb foundation that Novice sent me last year, that he knew must bring an admission out of me, was then, and is now, as near as I can determine impracticable. I never had any pure unbleached wax foundation, I am putting some to the test in every way I can think of now. We must be careful to separate possibles from practicables. What can be done is easy to demonstrate, but what can be consistantly and profitably done, is not quite so easily understood. This last is what I am experimenting upon. Doctors disagree, and I feel that I must decide for myself. JAMES HEDDON.

Dowagiac, Mich., June 11, 1877.

For the American Bee Journal.

Hardin Haines Ventilated.

"I commenced the season with 4 colonies, increased to 18, and doubled back to 12, Italianized 4, 6 are hybrids, 2 are black."—*Gleanings* for Feb., p. 47.

"I am going to raise queens the coming season with 10 or 15 of my fine home-bred queens of Staples and Andrews, also from Oatman."—Letter to Ch. Dadant, Dec. 25, 1876.

"I have 80 colonies, and nearly all pure Italians."—*Gleanings* for Feb., p. 54.

"I am going into the bee business pretty soon this season, with 65 colonies."—Letter to Ch. Dadant, Jan. 16, 1877.

"I had in the fall of 1875, 26 colonies; in spring of 1876, 19; fall of 1876, 81; spring of 1877, 76; Italians, 55; hybrids, 20."—A. B. J. for June, p. 196.

"My bees are not willing enough to work in boxes to please me."—*Gleanings* for Feb., p. 47.

"Spring, 1876, 19 colonies; box honey, 2,456 lbs.; extracted, 40 lbs. (131 lbs. of box honey and 3 swarms to the colony)."—A. B. J. for June, p. 196.

"I have got word from Italy. I will get my queens early in the season. I have only 2 imported stocks from Gentizen. That I forgot to tell you about."—Letter to Ch. Dadant, Feb. 15, 1877.

"I have sent a lot of money to Italy for queens. I got word from Italy that I will get my queens very early. Think we can ship queens with safety the last of March, April 15th, or sooner."—Letter to Ch. Dadant, Feb. 21, 1877.

"I am no more a swindler than you are. I have a great many fine imported queens that are nicer than yours."—Letter to Ch. Dadant, April 25, 1877.

"Ch. Dadant is not the man that I thought him to be."—Letter to A. I. Root, May 1, 1877.

Hardin Haines has advertised imported queens direct from Cyprus Island and from Italy. He boasts of having sent a lot of money to Italy in Dec.; in Feb. he boasts of having received word from Italy that his queens will arrive soon. Let him show this letter or one from Cyprus Island, with stamped envelope, and I will give him ten colonies of bees for nothing.—Extract from a letter from Ch. Dadant to A. I. Root, May 8, 1877, sent by my request, by Mr. Root to Hardin Haines, who has not yet answered it—June 10, 1877.

"I have heard enough of your nonsense," —Martin Haines, father of Hardin Haines. Extract from a letter to Ch. Dadant, May 5, 1877.

"If your son can show one letter either from Cyprus Island, or from Italy, with stamped envelope, I will give him ten colonies with imported queens. So you see that my 'nonsense' begins to have some sense."—Extract from a registered letter sent by Ch. Dadant to Martin Haines, May 11, 1877. Not answered.

In May, Mr. Staples, of Columbia, Tenn., received a queen from Hardin Haines, pretended to have been imported direct from Cyprus Island. Mr. Staples refuses to send the price (6 tested Italian queens) till Hardin Haines can prove that the queen was imported, which he is unable to do.

Mr. W. J. Andrews, of Columbia, Tenn., president of the American Society of Bee-Keepers, has offered $50 to Hardin Haines for a queen imported direct from Cyprus, on the condition that Hardin Haines would prove positively that the queen was a genuine Cyprian queen. Hardin Haines replied that he did not know that they were so high-priced.

No doubt he would have sent the queen, but the difficulty was to prove the importation.

I could cite more extracts of contradictory letters and reports, but the foregoing will suffice to show how reliable the young man is. CH. DADANT.

Hamilton, Ill., June 10, 1877.

For the American Bee Journal.

Scraps from Illinois.

I can almost safely be put down for "blasted hopes." Last fall I had 22 stocks of bees, all pure Italians, in splendid condition, strong in bees and honey. Aug. 31, a big wind storm passed over our section of country, blowing off hundreds of bushels of apples. As a consequence the cider mills were set going, and two of them were running constantly, within a fourth of a mile of us, till long after cold weather began. The bees went to the mills by the thousands, there being little or no fall forage. This spring we see the result, in an almost total sweep of bees from our "cidered" district, there being but a small per cent. left. We came out with the least loss of any one, and lost 13 out of our 22, the remaining 9 being weak, some of them being nothing but nuclei. A great many others losing all they had, a few saving 2 or 3. Outside of the cider district, bees wintered well.

I am now at Benton's Bay, Mississippi River, where I am handling bees for Mrs. Levi Hollingsworth, and have also brought my own stocks down here. This is a good section for bees. They have begun to swarm but little as yet, but we expect lively times within a few days.

I received one of the Quinby bellows smokers of Mr. King's make; it is a much better article than I got from L. C. Root last year. Why King's smoker is well and strongly constructed, not quite so fine a finish as the Root-Quinby smoker, but I am putting it to a very severe test, a daily use on over 125 stands of bees, and I will warrant it to last with any of them. The leather is a good, strong article, while that on the Root smoker of last year was a flimsey article (it is much better this year), and would not last a month.

All the fault I found with my King smoker is, I had to put in a new tin valve—but a few minutes work—otherwise it is a No. 1 article. WILL M. KELLOGG.

Oquawka, Ill.

[In reference to the Quinby smoker made by friend King, it is but just to remark that he assures us that the one sent to this office was selected from the "culled" and discarded ones of a large lot that he had made. We are glad friend Kellogg has found the one he received so much better. Friend L. C. Root has sent us a sample of the leather he is putting into the Quinby of this year. It is very tough and thin, and looks almost like kid. It is tanned in a peculiar manner, making it durable, though very soft and pliable.—ED.]

Wintering Bees.

READ BEFORE THE ILL. ASSOCIATION.

Four antecedent requisites are necessary to secure at all times successful wintering. Yet they frequently winter quite well when the requisites are not perfect in all respects. They are as follows:

I. Good wholesome food.
II. A proper, uniform temperature.
III. Absorbents above the bees, or what is often called upward ventilation.
IV. Youthful vigor, or vitality to carry them through winter.

1.—The health of the bee, like all other animals, largely depends on wholesome food. During extreme drouths and the influence of a parched earth and burning atmosphere, the sacharine portion of the fluid or sap of all vegetation partakes very largely of the acid of the vegetable, the flow is too tardy and the quantity too scant, so it is adulterated before it reaches the floral cup. Under these circumstances, bees will forage largely on fruits, decayed apples, peaches, grapes, and the pumace about cider mills, etc. Such kind of food is no detriment to the health of the bee while upon the wing and in the heat of summer, but it dies from it when long confined to the hive.

Syrup made of good refined sugar is a fine substitute for honey.

2.—Notwithstanding bees often winter in a very irregular temperature, uniform success demands an even temperature, not too hot or too cold, about 45°. In this latitude, this can only be secured by a good warm repository. Where all things are equal, bees will live in dark confinement 4 or 5 months, and come out as active as they went in.

3.—Absorbents above the bees, in the shape of chaff or straw cushions, or the second story of the hive filled with leaves (a cloth first covering the frames) is almost indispensable for out-door wintering; but in a warm repository, they are all superfluous. All that is necessary is to raise or slip the lid of the hive a little to one side and let the moisture from the bees, which arises in the form of vapor, escape, otherwise it will condence into drops of water and damage the combs and endanger the lives of the bees.

4.—It was once stated by the late Samuel Wagner (if my memory serves me right) that bees grow no older when in healthy confinement. I am not inclined to be skeptical on this point; but it is apparent to all that bees that have lived out two-thirds of their time before they go into winter confinement will die in early spring before a sufficient number of young bees to generate heat and take charge of the hive are hatched. So bees, queen and all, become discouraged and decamp—a suicidal act, but with them preferable to a lingering death in their once happy home.

Where honey gathering is good the latter part of Aug. and first part of Sept. this matter always regulates itself where the queen is not forestalled, and her brood nest filled with honey—this, however, seldom occurs with good young queens. Where no honey gathering occurs at the proper season, all difficulties may be overcome by stimulating with sugar syrup.

During 20 years of close observation these things have passed under my own observation. To winter bees successfully, especially in shallow frames, is to be master of the business; yet it is easily done when correct philosophical principles are observed.

Last Nov. I put 230 standard swarms into my repository, and removed them to their summer stands the end of March, with the loss of 4 swarms. About 100 of them were in 5-in. and the balance in 7 in. frames.

Camargo, Ill. A. SALISBURY.

For the American Bee Journal.

How to Prevent Increase.

I wish to communicate the result of my experience on some questions that are of interest to all who are engaged in the business, and which is very frequently the subject of inquiry from them—How to prevent the further increase of your colonies after you have obtained as much as you deem advisable to have?

Exchange the position of your colonies that give indications of swarming, with such as are weak and need strengthening; selecting such as have hives resembling each other, as much as practicable. After you have made all of the weak ones strong, if some show the indications of swarming, you may, if you desire, make an artificial swarm out of two or more hives; or, if not, you can exchange places with two that indicate swarming, giving both abundant room for surplus honey, if they have it not already. The exchange of workers will demoralize them, and they will not get the swarming propensity again for a week or 10 days, even if they have queen cells capped over. And you need have no fear of your queens, for strange workers will not molest them in their own hives, in the swarming season. And in a few hours they will all be busy at work in the surplus boxes, if the brood chambers are filled, which I presume to be the case in the last instance I have given; but in the first exchanges you make with the weaker colonies, they will of course fill the lower part of the hive first.

I have been succesful in the management of my bees on the above plan. I have avoided all trouble with the moth millers by having my colonies strong. My increase was 100 per cent., and I never had as much surplus honey before. My bees all wintered well and came out in fine condition this spring.

I will mention what I have adopted as an improvement on the frame of the Langstroth hive. The top bar I make the usual thickness, ¾ in. deep, and cut a tongue on the under side, with a matching plane used for matching siding. Before putting bees in the hive, melt some beeswax, and while hot, with a pencil brush give the tongue a light coating of the wax. Set your hive, when you have put the bees in, perfectly level and you will have perfectly straight combs every time, without any other guide comb. When the frames are filled you may elevate the rear of the hive, but keep it otherwise level.

I have used eight of the above described frames in a box hive 12x12 in. inside, 14 in. deep, the frame let in a rabbet, cut in the inside, on 12 in. hives, ¾ in. long, to receive the ⅜ in. end of the frame and leave ⅜ in. for ventilation and passage for the bees over the frames, covered by a plain board top, with two cleats and screw in each of the two sides to hold it on. When boxes for surplus honey are needed this top is taken off and two boxes, 6¼ in. wide by 12½ in. long on the outside, 6½ in. deep, are put on, with cover to fit 8 in. deep, resting on two cleats on two opposite sides, 1 in. from top of hive, a cross stick to support the comb. The two boxes will just closely cover the top of the hive. This is a convenient and good hive for wintering bees, and making box honey.

I have used this hive very successfully with black bees for many years, and always have straight combs on these frames.

Sandusky, O. J. T. HOBBS.

For the American Bee Journal.

Wanted.

A corner in the JOURNAL to thank those who have so kindly and frankly spoken of the Bingham "cut-off" or direct-draft smoker. From some cause those writing have compared it with the Quinby smoker. Such comparison is entirely natural and in no way detrimental to bee-keepers. Not every bee-keeper, however, has a Quinby smoker, no not one in ten of the bee-keepers ever saw a Quinby smoker.

The real comparison then is not with a Quinby, but with the "chip-pan or Buffalo chips" accross which nine-tenths of all the bee-keepers blow their fragrant breath laden with fire and smoke in sweet endeavor to subdue the nervous hybrids. The question then is, is the smoker invented and made by Bingham so great an improvement on the above methods as to justify its purchase?

I could not do the work required in my apiary except with the most convenient tools, and I think I speak advisedly when I state that anyone using a Bingham smoker, even for a single hour, in his own apiary would never again put his nose to a "chip-pan or Buffalo chips." T. F. BINGHAM.

Abronia, Mich., June 12, 1877.

For the American Bee Journal.

Black and Italian Bees.

My experience has been somewhat different to that of Mr. P. Miller, as stated on page 90, March number of THE AMERICAN BEE JOURNAL.

Mr. M. states that he has 50 colonies of black or native bees, and that a friend of his a few miles distant has 100 colonies of Italians, and that his (Mr. M's) averaged 40 lbs. of surplus to the colony of blacks; while that of his friend was only about 25 lbs. to the colony of Italians.

Now let us look at both sides of this subject. Is is not possible that Mr. M. could have lived in a section of country that was adapted to the growth of honey-producing plants and trees of various kinds, and having only 50 colonies and probably there were not many bees besides his in that locality — while his friend, living a few miles distant, might have had a different location for honey. I do not say it is as I have stated, but we will suppose a case. His 100 colonies of Italians placed in a locality not so favorable as others, would not gather as much honey as would the blacks in a plentier field.

As Mr. M. speaks of his friend, I will say something about my friends and neighbors who keep bees. I will give names, and the distance they live from me.

Last summer, Mr. Martin, living ¼ mile south, had 4 stands of bees, 2 in Langstroth and 2 in square box-hives; increased by natural swarming to 9 stands, and got about 25 lbs. of surplus honey.

Mr. Myers, 1 mile north, had 4 stands of blacks, all in Langstroth hives; increased by dividing and one natural swarm to 9, and got about 30 lbs. of surplus.

Mr. Miner, 1½ miles north, had 5 stands of blacks; increased by natural swarming to 9, all in Langstroth hives, but failed to get any surplus.

Mr. Darrah, ¾ mile west, had 4 stands, all in Langstroth hives; increased by natural swarming to 8, all blacks, and got about 30 lbs. of surplus. I could mention many others.

My experience is somewhat different to that of Mr. Miller's. I started last spring with 2 colonies of Italians and 4 blacks, which were Italianized as soon as I could raise my queens. Then I raised queens, and as fast as my colonies sufficiently increased in bees, I took 4 frames with the queen and adhering bees from a strong colony and in this way made my increase. I introduced a fertile queen to the old hive. This I would do on a warm day, when the bees were working hard, so that I took mostly young bees to increase with. I increased in this way from 6 colonies to 42, with Italians, and got 125 lbs. of surplus honey; which I think paid me, for I sold 20 stands last September, for $120, to one man. My honey was weighed. I state nothing but facts. I worked for increase and not honey. I started with 12 colonies this spring. A. OSBORN.

Appanoose Co., Iowa.

For the American Bee Journal.

Introducing Italian Queens.

My method for introducing Italian queens is as follows: First find the black queen and remove her, then lift a card of comb half out of the hive and give it a few sharp jerks down and up, which will cause most of the bees to fall to the bottom of the hive. Wing off all that may be left on, and stand the card to one side. Lift up another card and treat it in the same way, and so on till you have all the combs out, and all the bees in the bottom of the hive. Now take half a pint of thin honey or molasses, scented rather strong with peppermint or lemon, and with a spoon sprinkle it all over the bees; stir them up with the spoon so that all will get a taste. Then open the end of the cage containing the Italian queen, hold it low down among the bees and let her run out, and as she does so drop a little of the same honey on her back and stir her up among the bees. Put the combs carefully in the same manner as you took them out, and close up the hive. If done in warm weather not one queen in a hundred will be killed by the bees; but if it is late in the fall and the weather is cold, it is safer to introduce in the old way, by caging the queen among the combs for 24 hours.

Vanneck, Ont. A. C. Attwood.

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Wintering on Summer Stands.

READ BEFORE THE MICH. CONVENTION.

I will here briefly give my present manner of wintering, with its results, and the circumstances and causes that have led to its adoption.

I have never had either a cellar or outdoor building, in which to winter bees, that I considered to be in every respect suitable for that purpose, neither do I now think that wintering them in any such repository, no matter how suitable it may be, is equal, all things considered, to wintering them on their summer stands, by setting the hive in a larger box and packing the space all around and above them with dry wheat chaff.

When what is now known as the bee-disease, the bee malady, or spring dwindling, first made its appearance some 7 or 8 years since, devastating as it did in some cases, large apiaries; others as well as myself were led to devise some more successful way of wintering than any we had previously adopted.

In the autumn of 1871, I had 50 colonies, 5 of them were in hives with the brood department about 18 in. long, 16 in. high, 8 in. wide, with a space designed for boxes on each side, the size of the breeding department, except that it was only 6 in. wide. This space, and also about 4 in. above the frames was packed snugly with dry chaff. None of them were lost during the following winter and spring, although 3 of them were reduced to quite small colonies; with one of the 3 queenless. A few of the remaining 45 colonies were left on their summer stands, but a large proportion of them were wintered in my granary. They were set on the floor, the cover taken off, a cloth spread on the frames, and the spaces between the hives filled with dry sawdust, and also 2 or 3 in. of sawdust spread over the whole mass of hives, leaving only a small hole directly over each hive and kept open with a tube for ventilation. Most of them came through the winter in apparent good order, but dwindled away very fast after they were set out in the spring; so that by June 1st they were reduced from 50 to 14 or 15 colonies, with perhaps bees enough in them all for 7 or 8 good strong stocks.

I commenced the following winter with 50 colonies, 15 of them inside box hives, packed with chaff, the same as the 5 were the previous year. The remaining 35 I attempted to winter in various other ways, which I will not now enumerate. In May, 1873, they were again reduced from 50 to 15 colonies, with 11 of them in chaff-packed hives. Four of them were strong colonies, the others were more or less reduced from strong stocks down to a mere handful. The heavy loss sustained during the two successive winters above named, taken in connection with the fact that for several preceding years I have obtained but little surplus honey, was certainly rather discouraging, even to an old bee-keeper. And I frankly acknowledge that if I could at that time have sold everything I had belonging to the apiary at a reasonable price, I should have sold out with the intention of forever abandoning the business.

I have frequently been asked why I stopped writing for the press about this time. If such an experience in wintering is not calculated to make one who has for years been teaching others how to winter successfully, haul in his colors and lower his flag to at least half-mast, he must have more "cheek" than I can command. Instead of trying to teach others, I was so ashamed, mortified, and chagrined at my failures that I felt more like crawling into a hole out of sight, and then drawing the hole in after me. However, the comparatively small loss of bees in the chaff-packed hives gave me some confidence to hope for better results in future, and that together with the encouragement "worked up" by visiting and trying to cheer friend Butler, who at this time was meeting with similar losses, induced me to give them one more trial, and as the sequel will show, with general success.

My 15 colonies, in the spring of 1873, were again increased that year to 50, and I obtained from them 1,800 lbs. of extracted honey besides what was used in the family. The honey was sold for over $300; had an increase (by using the old combs) of 2⅛ stocks and a cash income of over $20 from each colony wintered. This year (1872) I bought dry-goods boxes in which to winter nearly all my bees, at a cost of 50c. each. Some of them would hold 1, 2, and 4 hives each, and leave a space of 3 in. or more on all sides between the hive and box, and also over the top of the hive to fill with chaff. There were no covers to these boxes; an entrance or passage for the bees was made in one side, at the bottom of the box, just above the bottom board, to correspond with that in the hive. A passage was kept open between them by placing two strips of board 3 in. long and 1 in. thick, in the bottom of the box, one of them on each side of the entrance, and a piece of board 3 in. wide was then laid across these two strips. The hive was set in the box, the cover taken off, a piece of cloth larger than the top of the hive was spread on the frames, covering the whole of the top of the hive, and all the space around and over it was filled with dry chaff. To keep it dry it was covered with marsh-hay fastened on with twine. I lost no bees prepared as above during the following winter.

I was so well pleased with the chaff-packing as to make in the summer of 1874 some 30 or 40 boxes with tight-board covers expressly for that purpose, each one to contain but one hive. The winter of 1874-5 was perhaps the most severe on bees that was ever experienced by the great mass of bee-keepers in the Northern States. It was one that was well calculated to thoroughly test this chaff arrangement. If I remember rightly, I had that winter about 60 hives protected with chaff. I lost 4 of them; the 4 lost were buried under a snow drift, 8 ft. deep, for more than 2 months. The snow had melted around them; the boxes, chaff, and hives were wet, and the combs wet and mouldy.

The next winter (1875-6) out of 60 colonies so prepared, I lost none. During the winter just passed I had 70 colonies snugly packed in these boxes; all were alive and to all appearance in first-rate condition on Feb. 20; while out of 70 colonies (40 of them in an apiary 3 miles from home) that I have attempted to winter with only partial protection, I lost 9.

I will give a few reasons in addition to the saving of stocks, why I think wintering bees packed in chaff is preferable to housing them.

1st. In case of necessity, smaller swarms can be safely wintered.

2d. The work can be done as soon as the honey season is past, and with small stocks as early as Aug.

3d. It can be done at odd hours when it will not interfere with other business.

4th. The packing prevents the escape of any scent of honey from the packed hives to attract bees from other colonies, hence if all are so packed, robbing is effectually prevented in the bee yard.

5th. The bees have an opportunity to fly at any time during the winter when the weather will permit, an advantage which we think no one will dispute.

6th. There is no carrying of heavy hives filled with honey to and from the beehouse.

7th. During the cold weather in April and early May, these packed hives will be much warmer than those outside. The bees will spread over more surface of comb, a larger amount of brood will be found there, and the colony will increase in size, build up to a full one much faster and sooner than it could possibly be made to do (if kept at this time on its summer stand without protection) by any known process whatever, except it be by the addition to it of bees and brood taken from other hives. This positive assertion I broadly make without fear of successful contradiction.

8th. After the bees are prepared for winter they need no more care till the following May or June, leaving the apiarist at liberty to attend to other business, or if he chooses, to be gone from home for 7 months. This of course is only when good stocks with plenty of stores are selected for wintering.

The cost of these boxes is considered by some who have not used them, an objection to their use. A box can be made of sound, dressed, pine lumber, with a good bottom and tight board roof, large enough for one hive, at a cost of less than $1; I think for about 75 or 80c., while the increased profits from the larger swarms when wintered in these boxes will much more than pay their cost the first year. Or dry-goods boxes large enough for 4 hives each, with good shingle roofs made for them, that will cost, all ready for use, about 30c. a hive.

J. H. Townley.

For the American Bee Journal.

Notes from Louisiana.

I commenced to take honey on June 12th. The weather changed on Aprtl 11th, and was cold and dry until May 21; hot weather then set in, and we had no rain from April 13th till June 9th. During that time bees lost all they had gathered since April 1st. Since June 10th bees have done finely on tallow tree, swamp gallwood, and swamp jessamine. I shall expect plenty from corn during the next 30 days.

Tell friend Mahin, of Indiana, that I believe I can tell as well whether corn fields give honey here as he can. It hardly looks well for him away up there to tell me what my bees are doing at my home here.

You ask about McConnell of New Orleans. Well, that is not an easy question to answer. A year and a half ago he told a friend and me that he knew more about bees than any man in America. After looking around a short time I soon discovered that one of us knew very little about them. I soon left. You have all of one side of his great discovery. Now, I don't like to say too much, but one or two things I must say. As regards the time that the empty frame was put in, I doubt not that the bees built the frame full of comb in one night; that the queen filled it with eggs the next day; and that the bees began to hatch on the 22d day. But then comes the point. The combs which he claims built on said nights he also claims were built from or out of the material which he fed them. The combs themselves (I took sample of one) are exactly of the same quality and condition as the combs built by scales from the fattened bee's breast, and if melted would produce ordinary wax. Now if he can prove that the bees made the wax from the food and not from scales from the breast, then he has something to boast of, but positive proof only will convince any intelligent bee man.

I know that from March 14 until April 9, the honey flow or yield was very good in his section as well as mine. I have had two full frames of comb built in one night in this State, and it is not unusual to see a frame of comb built and filled with honey or eggs in 36 hours, in a good colony. His bees were then in a condition to accomplish just such a thing. Had it been done in a time of scarcity then it would be worthy of serious attention.

He was offered 5 cts. per frame for 10,000 combs by Perrine. I offered the same for 5000 more. He now offers to guarantee that he can build them for *one cent per frame*, yet he has not accepted either of our offers. Now I don't see any mystery about it; knowing the conditions, the results are not unusual. The comb built is of pure wax, but I must have the proof that they build it from anything but wax secretions.

I have fed bees on a mixture when they were not gathering a drop of honey, and had fine comb built. I obtained a part of the plan from Mitchell, as published in *Gleanings* not long since, but his plan was successful only when fed just after a good yield of honey. It has been tried by me only once in this State, and it did finely. I will give it a fair trial in Aug. and Sept. While in Pennsylvania, I had 7 frames, 12x12, filled in 13 days. They did not begin to build until the 4th or 5th day. The food cost 65 cts.; had I continued longer the cost per comb would have been less. Anything that will fatten bees, will cause them to build comb. Let Mr. McConnell prove that it can be built for one cent per frame, and his fortune is made.

Mr. Heddon need not fear of over-stocking the market with honey this year. California has failed; the South has failed, so the Northwest has to supply all the demand of the continent.

W. B. Rush.

New Orleans, La.

For the American Bee Journal.

A New Hiving Apparatus.

Being something new, perhaps it will be interesting to some to give a description of it in the JOURNAL.

Quite a number of enquirers say, "Why don't you describe it in the JOURNAL?" Some of the best bee-keepers are testing it this season, and you will hear from them in due time. What I offer in my circular is in good faith. I do not expect that any one has tested it before this season but myself. It was patented on May 8th.

DESCRIPTION.—First, a casing which hangs on pivots, resting on a frame; in fact the casing constitutes the queen yard, run back so as to make a platform for two hives to rest upon. The hive containing the bees about to swarm is placed on this platform behind the pivots; the empty one before (that is, where one hive sets behind the other). I am manufacturing some where the hives set side by side in this case; two-thirds of the hives are behind the pivots. An inclined step comes up into the empty hive through which the bees enter; a raised strip is placed between the two hives, in which is a door; a wire is fastened to this door which runs down through the casing and is fastened to the frame below. When the hives are placed side by side, the raised piece runs from front to rear, and *visa versa*. I get up these two forms to accomodate the different kinds of hives. Under the hive containing the bees is a hole lined with tin. The best plan to make this opening is to put a mica door in it, so arranged that bees can pass out but not return. But if the tin will answer it is less expense and trouble to make. In front of the queen yard is an extension of some kind upon which to place weights to balance the hives. Where the hives are side by side, a spring is necessary at the back, under the casing, fastened to the frame.

OPERATION.—When the hives are put up close against the raised strip (where the entrances do not fit, corresponding ones must be made in the hives) the bees work through this strip (in which is the door as before stated) into the empty hive, down the inclined step and out of the queen yard. The weights must be so arranged that the back part is the heaviest by a few pounds; if this part becomes lighter, the casing tips up to the front, the door is closed and the queen stays in the yard. When the bees return they will enter the same entrance into the new hive, where they will cluster and go to work.

But how, if the bees are not all out when the casing tips, will they pass out through the tin tube or mica door (as the case may be)? In case the hives are placed side by side, the spring under the back part prevents the casing from tipping back when the bees return; but in the other case it is not necessary, because the empty hive is in front of the pivots. It might be possible that in some cases the bees in returning would so crowd in the casing that some, and possibly the queen, would get up through the tin tube. If any such cases are reported I will dispense with the tube and use only the mica door. The queen will get out of the yard; I saw her crawl out. Put a little sewing-machine oil on cotton and rub the underside of the glass (perhaps tin will do as well if oiled), and no queen will ever get out, if properly clipped. I clip one wing only, and about half off.

I have shipped a few with two steps, so arranged that when the casing tips, the step to the hive where the bees swarmed out of is raised; but in this case the bees must pass up another step, and in addition a bearer must be used, so I prefer the one described above. Will some one that has received one of the latter please report?

New Berlin, Pa. R. B. OLDT.

P. S.—Since writing the above, I have used tin with success. Let the strips be 2½ or 3 in. wide. What is over 2 in. bend at right angles. Let this extend inward, if oiled. No queen will ever be able to get around this bended edge. R. B. O.

For the American Bee Journal.

Sending Bees by Mail.

I am sorry that the subject of sending queens by mail has been stirred up again. Those who will examine the back numbers of the JOURNAL will find that I have been through the mill once. The whole trouble was brought about in the first place by some unexperienced person putting new honey comb in the cages instead of using a sponge to hold the food during transit. Of course it would run out and daub the mail. I don't know whether the same official runs the bee part of the mail now who did several years ago, but this dignitary threatened if he was troubled again with bee matters to make an effort to have them excluded from the mails. I don't think that the P. M. General understood much about it, and cared less. There certainly can be no objection to sending them in the mails as they are now put up. They will not daub the mails any more than so many newspapers. It is useless for any one man to undertake to do anything about it unless he be a Congressman, and he cannot do much unless he be in accord with the administration. Apply to the men who represent our districts in Congress. Make such a howl as will make them glad to revoke the order. Go to work with a will and fight and something can be accomplished.

We had a dog law here in our State that did not amount to anything. I made an effort to have a more stringent one enacted; and did not work in vain. We now have a much more stingent one, but not just what we need.

By the way friend Newman, lest some of your readers might consider me slightly insane on the dog question, I will explain why I sent that short article on dogs, a few months since.

One year ago on the 30th of May last, I lost a little 12-year old daughter by hydrophobia. She was bitten by what is called a white spitz dog, belonging to a neighbor, 3 months previous to her death. The dog was not rabid at the time it inflicted the wound. I killed it within 12 hours after it bit my child. Now, as friend Newman says, I am after the dogs, and intend to use all honorable and legal means for their extermination.

Many thanks to friend R. Miller for his recipe for the bite of a mad dog. I think I have seen that before. I intend to send it to the papers and have it circulated as much as possible. Thirteen persons have died of hydrophobia since May 9, 1876, in this State alone. Two have died in a town not over 12 miles from Wenham, since last April; and there are upwards of 100 persons in Mass. who have been bitten by rabid dogs, and who are fearing death by the above disease. H. ALLEY.

* * *

For the American Bee Journal.

Introducing Queens.

Why is the introduction of queens so successful in spring and early summer, and so difficult later in the season? I have spent many hours thinking over this subject, without finding a plausible answer.

At first I thought that bees, being more cross late in the season than earlier; the difficulty arose from their unamiable disposition. But now I have all pure bees; most of them can be handled late in the season without being the least aroused; yet I have had queens killed in Oct. by the most peaceable of them; while the bees of colonies more difficult to handle accepted the new queen readily.

Then I supposed that, some robbers having crept into the hive, the bees had mistaken my queen for a robber. No doubt the robbing of a colony is often prejudicial to the safe introduction of queens; but we have had queens killed when not a robber had entered the hive. So till lately I was at a loss to find the true cause of this difficulty; yet, step by step, I arrived at a conclusion which gives me hopes that I have at last found the true cause of this case, and the means of avoiding it. Indeed, these means are not yet sanctioned by experience; but I will try, and I beg some of my friends to try for themselves and report.

Late in Oct., my son and I were looking for a queen. We had visited every comb without finding her. Then, as we resolved to replace her, we began anew our search, putting every comb, as soon as visited, in an empty hive for this purpose. All the combs had been searched in vain, when my son saw in a corner of the hive, on the bottom board, a small ball of bees; the queen was in the inside of it, a prisoner.

Naturally, the question came to my mind, "Why did the bees imprison their own queen?" It was a cold day; we had very few bees flying, and had not noticed a single robber around us. Certainly the queen was not imprisoned before our opening her hive. As we had not been able to find her on the combs, she must have dropped off when we took them out. A bee on the bottom, probably one ot the guards, was astonished to find a queen so far from the place where they are accustomed to dwell, and, mistaking her for a strange queen, climbed on her back; a few other workers caught the same idea, and soon formed the ball, in which she was imprisoned.

Now, how many valuable queens have been killed by such accident, who can say? The lesson that we can draw from such accidents is that it is not always safe to visit the bees late in the season.

But to my subject. In the Jan. number of the *Bee World*, Mr. Mahin narrates that, having to introduce several queens, he took away those to be replaced and put every queen to be introduced in place of the suppressed one, on the same spot of the comb. Five queens were thus introduced, not one was killed. One of them having been put on the other side of the comb, was imprisoned by the bees; another, who run around the comb on which she had been placed, was also imprisoned; but both were released after some time and accepted.

Now if we bring together both these remarks—first, that a queen of a colony can be mistaken for a stranger by her own bees if she drops accidently from the brood; and secondly, that a strange queen can be mistaken as their own by the bees, if she is put where their queen was before suppression—we arrive at the conclusion that the bees will be more ready to accept an alion queen if, when she is put caged in the hive, her cage is near or directly upon the brood.

In early summer the brood is very abundant in the hives; it is spread everywhere; the bees are accustomed to see their queen going in all parts of the hive, hunting for empty cells. Then the introducing of queens is easy; but in Oct. there is little brood in the hive, only a small part of a few combs contain it. These combs have their upper part filled with honey. The hive is cold, but around the brood, where the queen used to dwell and lay. If we put in a hive in such circumstances a caged queen, and if the cage is not placed directly upon the brood, the bees are not well disposed to accept her on account of her distance from the brood. She is held as a stranger by the bees, who do not yet know that their queen is missing, and queen cells are started by the bees, who having hunted for her around the brood were unable to find her.

If my theory is true, we can easily avoid all losses of queens while introducing, by the precaution of lowering the cages so that they touch the brood.

In the Feb. number, Mr. Alley writes about his method of introducing queens by drumming out the bees. I have tried this method several times on box hives of my neighbors; but with only partial success. A queen is never safe by this method, when honey is scarce; for you cannot prevent strange bees from joining those drummed.

If Mr. Alley had to introduce imported queens at the moment of their arrival, when they have the smell of rotten or dysenteric bees, he would not be so positive in his assertions. CH. DADANT.

* * *

For the American Bee Journal.

An Explanation.

In answer to friend Alley, who refers to me in the June number as "a prominent bee-raiser of Ohio," and quotes Novice as stating that I never raised queens on Kelley's Island, please let me say that for two summers I spent my entire time on that Island, raising queens. This can be proved by many witnesses. Friend Alley cannot produce a single word from my pen advising him to get queens of me. He wrote me for 3 untested queens, which I sent. In a few days he sent me two queens in his own cages, claiming that they were the ones I sent. Why, then, were they not returned in my cages?

I will make this proposition: I will send a tested queen to the editor of THE AMERICAN BEE JOURNAL, if he will do the same, and he shall report in the JOURNAL which produces the best bees. It is my motto to raise pure Italians, but if friend Alley has better bees than mine, I want some of his stock. A. BENEDICT.

Our Letter Box.

Manitowoc Co., Wis., June 11, 1877.—"Bees have not done much yet, as the weather is cold. Many have died in this vicinity." FRED CLAUSSEN.

Woodbury Co., Iowa, June 14, 1877.—"Bees are doing poorly, this spring; cold and wet weather the cause." B. P. YEOMANS.

Chillicothe, Mo., June 15, 1877.—"I flatter myself I have the nicest apiary in this country. I really don't think I have a crooked or irregular comb in 40 full stocks." J. W. GREENE.

Cincinnati, O., June 5, 1877.—"The honey season has begun to open, and the prospect never was better, if we may judge by the abundance of white clover covering the commons." C. F. MUTH.

Wabash Co., Ind., June 6, 1877.—"My bees are doing finely. Just had a nice rain, which will cause the honey to flow in abundance, from the white clover that now covers the ground everywhere." J. H. WASHBURN.

Garden Plain, Ill., June 14, 1877.—"I have a swarm of bees on the scales that was 15 tbs. heavier this morning at 6 o'clock than at the same time yesterday. I was not at home in the evening to test it before there was any evaporation." R. R. MURPHY.

Waterloo, La., June 9, 1877.—"Bees are gathering honey slowly, here. It is very dry. The last rain we had was on April 28. My hives are full of honey, but I cannot extract yet for fear of robbers. Bees are not gathering fast enough." L. LINDSLY, Jr.

Mower Co., Minn., May 28, 1877.—"I put 5 colonies into winter quarters on Nov. 7th; lost 4, owing to 40 days of continual freezing; the bees could not get at their honey; they starved with plenty of honey in the hives. Gave the remaining swarm a good fly in Feb.; another in March; it is doing well now. I bought 3 more of I. Ingmundson, and one from Ch. Dadant. All are doing finely. The bees I bought of Mr. Dadant proved to be not perfectly pure. They were well-marked, but not as fine as my others. I notified him, and within ten days he sent me a beautiful queen, by express, to replace the other; tested and warranted pure, without further charge. This is honorable and upright dealing, which should be encouraged. He will hear from me again, should I have the misfortune to loose any of my bees." C. F. GREENING.

San Bernardino Co., Cal., June 8, 1877.—"The Bingham smoker is received. I am much pleased with it; it is one of the best things in the way of a smoker I ever saw. I cheerfully recommend it to all apiarists. Would like it better if the tube was a little larger." WM. G. BAILEY.

[Friend Bingham now makes a larger tube—price $2.00. We can send you one, if desired.—ED.]

San Bernardino Co., Cal., June 7, 1877.—"Through Feb. and March my bees did exceedingly well, building comb fast; April and May was wet and cold, giving us three old-fashioned Eastern thunder storms, accompanied by hail and rain. Our bees are now very strong in numbers, many of them being built up to 3 stories in Langstroth 12 frames. We are looking for a good yield of honey." G. B. WALLACE.

Winnebago Co., Ill., May 30, 1877.—"My bees have done well. Last summer I got 125 lbs. of box honey from several of my hives, besides what I extracted from each of them. I put 60 colonies into my bee-house in the fall; I lost none, nor have I lost one in 6 years. They had plenty of brood and drones when I took them out on April 1st. I have kept bees for over 30 years but do not think I would consent to keep them without THE AMERICAN BEE JOURNAL. I wish it abundant success."

JOHN H. HODGKINS.

Onondaga Co., N. Y., June 11, 1877.—"I have kept bees more or less for about 30 years, usually with good success, wintering in my cellar. To save labor, last fall, I tried wintering out-doors. I packed most of them in straw, underneath and all around, except front, and the caps I filled with straw. The snow came on deep, and the hives drifted under to the depth of 4 ft; there being no frost in the ground, they became very damp, but wintered through with the exception of 3 or 4, which had lost their queens. About March 25, I set them out heavy in honey and strong in bees. They began to dwindle; what did not die in their hives would swarm out and unite with other swarms, leaving plenty of honey, clean combs, and some of them a good queen. After they commenced, the swarming seemed to be contagious, 3 swarms coming out in about 15 minutes—not a very good way of uniting swarms. And now the result is out of 61 or 62 swarms I have but 21 which are doing well, although some of them are quite late in getting to work. Although this would properly come under the head of "blasted hopes," I do not propose to quit the business. Fifty per cent. of the bees in this locality are dead."

EDWIN S. EDWARDS.

St. George, Kan., June 10, 1877.—"It has been wet here for a month. The Kansas river is now full to the banks, and 4½ in. of rain fell last night and it is still raining. The valley will soon be overflown for the first time since 1844, when steamboats could have run where Manhatten, North Topeka, and many small cities now stand. The prospect is terrible, but we hope for the best. My farm was visited by a terrible hail storm on the 2d, which destroyed about $1,000 worth of fruit, buckwheat, and other produce, so my bees have to live on sugar for the present. My river-bottom farm I fear will be submerged with 500 bu. of corn in the crib, and this is the fate of hundreds and perhaps thousands of farmers. My home farm is on the 2d bottom, 50 ft. or more, above the river bottom. I hasten this letter as communication will be suspended for a while, by the floods."

JACOB EMMONS.

Grant Co., Wis., June 19, 1877.—"The Bingham smoker you sent me is received, and I am very much pleased with it. My bees are doing splendidly; everything promises a good honey crop. The basswood trees are completely covered with blossom, and the bees are reaping a rich harvest from them." J. M. Gillis.

Hadley, Ill., June 19, 1877.—"We are having plenty of rain—too much for my pets. I sold down to 125 swarms; they are in fine condition. Some of them are working in boxes. I would say to friend Alley that my bees do not raise drones in winter. The queens he sent me raised drones last fall, and I consider he imposed upon me by sending such inferior queens. I do not think they had ever mated. All I ask is fair treatment. I will send the queen, as I said before, if he writes to me. Our fields are white with clover, all we want is sun shine." Frank Searles.

San Diego Co., Cal., June 1, 1877.—" Our honey crop will be nearly a failure this year, on account of a lack of rain till too late for honey-producing flowers. I do not think that there will be a car-load shipped East this season from San Diego. I planted mignonnette last spring but the drouth has rendered it nearly useless. It is a good plant for bees, in usual seasons. White and blue sages are now coming into bloom. I am trying another plant, for a dry season, and so far it has done well. All we need here in San Diego to make plenty of honey is to have wet winters and summer dews. I send you a few seeds of the Australian flowering peas, which bring the humming birds to your door if planted there."

Samuel Marshall.

[Our daughter has planted them under the dining-room windows, and we shall soon see their beauty and smell their fragrance. Accept our thanks.—Ed.]

Cedar Co., Mo., June 6, 1877.—"Friend Newman: I received a nice yellow queen from you as a premium for a list of subscribers. I am well pleased with her. I would say to others that if they will try to get up a club, I am sure they will get what you promise them, and thereby extend the circulation of the Journal, and benefit themselves and their fellowmen. My bees are doing tolerably well. I went into winter quarters last fall with 86 colonies, and came out this spring with 87. Strange but true! I took particular care last fall that every one of my colonies were in good condition with plenty of honey and pollen; and I left them on their summer stands without protection. On Jan. 31st, a colony had starved out in the woods (or come from some of the neighbors) and came near my apiary. I took out some combs of honey and put them up in the bush where they were settling and they soon clustered on them; I brought them home and gave them plenty of honey, their queen was with them. They are now breeding and getting strong. My bees are all getting along very well, they are getting strong but not gathering much honey yet. They have gathered a little and made some new comb, and I have had some new swarms. I use the Langstroth hive, 20 frames. I made 25 hives with 24 frames, last winter, to try them. I am an enthusiastic in bee-keeping. I think it the greatest treat to get to work with them. I think everyone should keep a few bees; there are plenty of sweets for all if they would but have the bees gather them at the right time. If any one expects to make it a business they must study the science, in order to make it a success."

J. F. Lynn.

Montgomery Co., Ind., June 21, 1877.—"We have had a good honey season for about four weeks. The poplar has been very good, furnishing honey in great abundance. Linn, or basswood, will soon be in bloom, and if the weather continues fine we will have a good flow of honey for some time to come. White clover is abundant. I have made several efforts to find honey in the clover bloom, but have not succeeded in finding any yet; it may be that I don't get hold of the right blossoms, or my investigations are insufficient. I wrote you last spring that the winter had nearly destroyed my apiary, which was the case, but you had better believe I am recruiting the thinned ranks with a 'whoop.' I have got nearly all the combs filled."

Isaac Sharp.

Iron Co., Mo., May 6, 1877.—"Mr. Editor: To-day I went into the garden with a friend who wished to see a hive, to which I had lately transferred a black colony, and was surprised to find the alighting board covered with the wings and abdomen of bees. It was so rainy and cool that the bees would only show themselves at the entrance, but there were parts of a hundred bodies strewn over the front of the hive. The abundant dropping indicated that a bird had perched on the stand in front of the hive. I knew the cause of the trouble. I brushed off the boards, but soon afterwards found that more had been killed; so I laid for the depradator with a double-barreled shot-gun. I had not long to wait, but was surprised to find, instead of a bee-martin, a bird that I have seen nowhere described as guilty of such tricks, and so watched his maneuvres. Sitting on the stand in front of the hive it would stick its bill into the entrance and snap every worker that showed itself, and then hopped a few feet off to eat it, and return at once for another. I found the head and body of a bee in its mouth; crop it had none, but its gizzard contained nothing but the remains of black bees. The children wanted the wings and tail, but as I am not sure of the species I enclose them. I thought it the female of the red cedar bird. Six years ago they were very numerous here, but for some reason they have been very scarce for 3 or 4 years, and I have almost forgotton the exact color and size of the female. This bird seemed too small and too bright a yellow underneath; the beak was heavy and strong, measuring ¾ in. by ⅜ in. broad and deep at the base, and resembling in color the plumage. Pass it around for an impudent thief. If the natural law of compensation holds good in this case, however, this bird must do a deal of good somewhere and somehow."

Wm. Cam.

[It is a hard matter to decide the species from the wings and tail sent. We scarcely think it can be the red cedar bird, or American wax-wing, as it is often called. Such tricks are not, we think, generally charged to its account.—Ed.]

Bloomfield, Iowa, June 22, 1877.—"When is the best time to plant basswood seed?"
D. M. D.

[Early in the spring.—Ed.]

Franklin Co., Kansas, June 19, 1877.—"I bought a swarm of Italian bees in June, 1876. They swarmed twice after I got them. I have had 3 swarms this spring—making 6 in all."
J. Wemmer.

Antrim, Minn., June 18, 1877.—"This is the land of the 'festive hopper.' I am happy to say, however, that they seem to be rapidly on the decrease. This is a fine agricultural region, but I think rather unfavorable for bees—too windy on the prairies. I have no bees here, but could not do without the Journal, and think you are keeping it well up with the times."
L. M. Lindley.

"I see in the last Journal that Mr. Perrine advertises comb foundation at 50c. per ℔. Does he sell it at that price for a single pound? Please tell us in the next Journal."
Jacob Greene.

[No; he sells no smaller package than 100 ℔s. at that price, and that only of 12x18 size; he does not cut it to suit frames at that price.—Ed.]

Brown Co., Wis. June 25, 1877.—"Our little industrious workers have had rather a poor season thus far, in this portion of the State. The winter was severe on them, but not so hard as the spring. The extremes of cold and heat caused a falling off of about an average of one-third of the colonies; and then it has been very dry the most of spring and summer up to June 6th. So the bees have had all they could do to gather enough to live on thus far, and very many colonies that were not fed starved to death. I fed my bees freely and they were doing well in brood until June 2nd, when they got a severe check by the destruction of my farm buildings by fire, consisting of 4 large, well-furnished farm barns, sheds, grain house, hog pen, dwelling house, out-buildings, household effects, farm machinery, wagons, carriages, harness, etc., and the most of my apiary equipments; and it came near destroying all my bees. My loss is estimated at from $7,000 to $8,000. Have commenced extracting. White clover is now in bloom and bids fair to afford good pasturage."
Chas. R. Clough.

Sumter Co., Ala., June 14, 1877.—"I will ask a few questions concerning my bees, which I shall be glad to see answered in the next number of the Journal.

"One of my hives (No. 6) wintered in a fine condition, and this spring sent out two fine swarms which have been doing well. The parent hive seemed to be doing well, except that it would not go to work in the honey boxes; and I thought perhaps there was something wrong, and opened the hive and found that there was not a single egg or young bee in the combs. I did not look for the queen, because they were busy at work filling up the brood chamber with honey. I took it for granted that she must be there or they would cease work. Can you tell me why there is no brood in the combs? When I first opened the hive I thought perhaps they had just hatched out, but looked again in a few days and still there was no brood there.

"I have just received my extractor and it works like a charm. I have some trouble in getting the bees off the combs when I get ready to extract. Please give me your plan of getting rid of them. My bees are gathering honey very fast. They fill up after extracting, in 3 or 4 days.

"Three or four of my strongest hives seem to have more bees than can work in them at once; they come out every day and cover the sides of the hive, those that are not in my house; and those in the house collect at the entrance. Can you tell me why? My hives are 12x14 in. inside. Do you think that large enough for the brood chamber? Do you use quilts or not on the top of your frames? If so, how do you keep worms from the top of the frames?"
A Subscriber.

[Queens are liable to become impotent, and if that colony had one, she was evidently in that condition or there would be brood.

A sharp jerk of the combs usually displaces the bees; or they can be easily brushed off.

Your hives are large enough; but this idleness is caused by too confined space within. Either divide them, give them boxes, or use the extractor to give them room to work.

We do not use quilts; strong colonies will usually dispose of all bee enemies.—Ed.]

California Bee-Keepers' Meeting.

The Bee-Keepers' Association met at Los Angeles, on May 19th at 11 o'clock. A. J. Davidson in the chair. The secretary being absent, Wm. Muth-Rasmusson was chosen temporary secretary. A. J. Davidson read a letter from Prof. Harbison on the honey prospects for the season, when a general discussion of the same ensued.

It was moved and adopted that the time of meeting hereafter be at 11 A. M. instead of 1 P. M.

Reports of committee appointed at the last meeting was received.

Mr. S. D. Barber, a prominent apiculturist of Mattoon, Ill., was introduced and addressed the meeting in regard to the size of hives, when the subject was discussed by Mr. Butler and others.

T. A. Garvin, E. A. Beardsley and J. M. Smith were admitted to membership.

J. E. Pleasant stated that the bee men in his neighborhood had issued a call for a meeting to be held on Saturday, the 26th inst., for the purpose of organizing an Association.

Overstocking was then discussed by Davidson and Levering.

J. W. Wilson then exhibited a specimen of canned peaches preserved in honey, which gave entire satisfaction to all who sampled them.

The meeting then adjourned to meet at the same place on the third Saturday in July, 1877.
Wm. Muth-Rasmussen,
Sec'y, *pro tem.*

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, AUGUST, 1877. NO. 8.

Editor's Table.

☞ Having taken our son into partnership, in the printing and publishing business, the name of the firm will hereafter be "Thomas G. Newman & Son," to whom all Money Orders, Drafts, etc., should be made payable and all correspondence addressed.

☞ The Kansas City Industrial Exposition and Agricultural Fair will be held, open to the world, on Sept. 17 to 22, inclusive. Their catalogue embraces everything usually included on State Fairs, and will no doubt be largely attended.

☞ Crops all over the country are excellent—the "good time *is* now coming," sure! Welcome. Those subscribers who have asked us to wait till harvest, which we have cheerfully done in all such cases, will now have the opportunity of making us *glad* by the receipt of the amount of their subscription, and the name of a *new* subscriber to keep them company. With a plentiful harvest and good prices it will be easy for each one to get at least *one* new subscriber. Pay us out in that way, and we will call it square.

☞ *Our Home Journal*, of New Orleans, La., has the following:

> Mr. J. M. Winder, of Terre Bonne, is lately from Ohio and has settled in Louisiana for the purpose of engaging in bee raising. He has already about 150 hives. Comparing his experience with the North, Mr. Winder finds that Louisiana possesses many advantages over the North as a honey-producing section.

We are glad friend Winder is getting started again. He has had some very unpleasant experience since the panic of 1873, but we hope he has many prosperous days yet in store.

☞ The Center Point (Iowa) *Mirror* says that Wm. Hunt is taking an average of one thousand pounds of honey per day from his hives. He must have a large number of colonies. Will he please tell our readers how many he has?

☞ The season for State and County fairs is now almost here. Any one who may attend them, and could put up a few of our Posters will oblige by letting us know. We will supply them for that purpose, and present any one for their trouble with a copy of the new work entitled "The Dzierzon Theory; being a full elucidation of scientific bee-keeping by the Baron of Berlepsch;" or the pamphlet on "Wintering"—as they may choose.

☞ New Orleans has had a fruit fair, and Mrs. W. W. Smith, of Metairie Ridge, La., exhibited some nice honey. The *Home Journal* remarks:

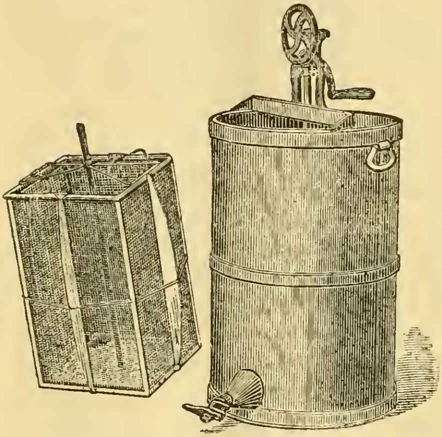
> Mrs. Smith is an amateur at bee-raising, but has an apiary of over 125 hives of bees, and her location on the Ridge is a good one for the bees as they have the benefit of the natural flowers of the swamps, as well as the flowering trees. Some of the honey sent us was gathered from the century plant.

NOVICE sent for our inspection some of his new white clover honey in small sections. The honey is excellent, and the sections make it very convenient for marketing — holding about one pound each. Eight of these sections just fill a Langstroth frame; and he has made a packing case, with two glass sides to show the honey, which holds 48 sections. This is the best and most inviting form for shipping honey that we have seen. Novice's hive, filled up with these sections, is quite an attraction to our visitors, many of whom never saw such before.

Muth's Extractor.

Hereafter the Stephenson extractor is to be known by the above title. It appears that it was originally invented by Mr. Stephenson, but Mr. Muth has "improved" it considerably and wishes it to be called by his name, as he says he is determined to bring it into use—being fully persuaded that it has no superior.

We have had several inquiries respecting it that will be answered by the following cut and friend Muth's remarks.



> The cut gives, as you see, the outlines of the extractor. The slanting position of the sides of the basket in my extractor is of the most importance, as combs empty best and quickest when the cells have a downward tendency, besides one can empty a piece of comb without a frame very readily. Taking off the covers when extracting makes it very handy for the manipulation of combs, and the extractor is shut complete when the cover is put on. No extractor can work easier, or be of simpler construction than mine; and of what importance the repticle for honey in the extractor is, every one knows who has extracted honey.
>
> Chas. F. Muth.

☞ The New Bedford *Standard* has our thanks for the following complimentary notice. It says:

> The American Bee Journal, which greets us on the first of each month, is an enterprising periodical, and is in the front rank on bee-culture and the production of honey. Its contents are divided into editor's table, notes and queries, southern notes, foreign notes, correspondence, and our letter box. Friend Newman gives his patrons the pure honey in the comb, no diluted article. Thomas G. Newman, Chicago. $2 per annum.

Railroad Strike and Riot.

The last ten days of July has witnessed an extensive strike of railroad employes and riots. Several hundred lives have been sacrificed, and a large amount of property destroyed. Business was prostrate and travel almost ceased. Pittsburgh, Baltimore, Buffalo, Hornellsville, Cincinnati, Indianapolis, St. Louis, Chicago, Salt Lake City, San Francisco, and hundreds of other places have been visited by this dire and dreadful plague. The military in five States of the Union have been called under arms, and demands sent to the General Government for assistance. From the Atlantic to the Pacific mob law asserted its supremacy, and caused the sacrifice of much human life and property. To place an embargo on a nation's commerce—to set at defiance its laws—to murder its citizens, and consign its property to the flames, is no trivial matter; and when the smoke is cleared away and order is again restored, the authors of such diabolical work will find to their sorrow that "justice will be meted out" to them without mercy.

The conflict is one between organized capital and banded labor, and may not be settled as rapidly as some imagine. There are rights and wrongs on both sides, but there can be no excuse for the riot, pillage and murder that has already been caused. Insurrection must give way to law and order before discussing the rights and wrongs of the question, and the sooner that is done, the better for all concerned.

For several days letters sent to this office were detained by the "strike," but as we go to press all the railroads are again runniug, and mail matter is coming as usual.

☞ D. Tremontani, of Cremone, Italy, writes us that he ships not less than 8 queens in any one shipment. For the convenience of several who have ordered through this office, we have sent for several shipments and will re-ship them as soon as they arrive—dividing the express charges among the number received in good order.

"What Shall the Harvest be?"

In every department of agriculture—a bouncing big one! That is generally so, certain localities present us the exception to the general rule.

As to bees and honey the same general rule applies. Our correspondents in this issue of the JOURNAL have expressed it thus:

"We have had a good season." H.

"Our bees are doing well." WM. DYER.

"Bees are doing well here now."
C. F. GREENING.

"Bees are doing first-rate here."
JOHN CROWFOOT.

"Bees are doing well this season."
G. W. ZIMMERMAN.

"Honey never more abundant."
JAMES HEDDON.

"I have 1500 stocks of bees, doing well."
J. M. HICKS.

"This year I have 1,200 lbs. from 21 colonies." CHAS. F. MUTH.

"I have taken 1,500 lbs. of honey from 60 colonies." H. A. SIMONDS.

"Have taken 3 tons of honey, and expect 2 tons more." J. OATMAN & CO.

"Bees are knee-deep in honey—and white clover at that." J. A. WATERHOUSE.

"The best honey season for white clover for several years." JOHN ATKINSON.

"I have taken 3,000 lbs. of comb and extracted honey thus far." FRED KRUEGER.

"This has been one of the best seasons ever known in this county." A. F. MOON.

"I have doubled my bees, and have 100 lbs. new honey so far."
J. L. ANDERSON.

"This is one of the best seasons ever known in Central Georgia."
W. H. GREEN.

"I have taken 6,000 lbs. of white clover honey up to date, and expect 5,000 lbs. more." DR. E. C. L. LARCH.

"Our bees have done well, but our great honey harvest is yet to come from wild flowers, etc." WM. DYER.

"We have had cool weather and heavy rains, but now there is an abundance of white clover and basswood."
J. H. MARTIN.

In California, honey is an entire failure this year, and light in some parts of New York and the grasshopper country.

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☞ C. O. Perrine has been visited by another fire. This time he had nothing burnt, but his whole establishment was flooded with water by the fire engines. He was fully insured. He has now removed his "Honey House" to Michigan Ave.

Our Slate Registers.

The following letter concerning the Slate Registers we have just had made, will be read with interest:

FRIEND NEWMAN:—We received the Slate Registers in due time (express charges only 35c. on the 100), and only one slate broken. Have taken off all the cards and put the slates on, and are highly pleased with them. We would recommend their use by all apiarists that wish to keep order and system in their apiaries.

Our way of using the slates is as follows: First, however, I would say that we, like many others, practice cellar wintering, and have a stand and alighting-board to set each hive on. Each alighting-board is numbered and the entrance block is numbered to correspond. In taking our bees out for a fly in winter, we see at once by the number on the entrance-block which stand to set the hive on. We number the slates according to that on the hive, using the *upper left-hand corner*. And if we know what particular queen mother the queen was reared from we use the *upper right-hand corner*, using the number on the hive containing the queen mother. We also take note of the color of the queen, workers and drones, by numbers, using the *lower end* of the slate. For instance, we examine a colony whose queen is large and bright in color; we number her 4, using the *left-hand lower* corner, indicating that she is a standard queen. No. 2 or 3 would indicate a queen of inferior color or size. Should her bees be dark, medium, or very light in color we number them accordingly, using the *lower right-hand* corner. If they be dark, 2; medium, 3; very light, 4. We use the space between the queen and worker numbers for the drones, and number them according to quality; if they are large and bright in color and uniformly marked, we put them 4, etc.

With slates we can note the date of a colony swarming; date of hiving a swarm; of putting on boxes; number of combs in each hive; or should we divide our bees and not have empty combs enough to fill them. We always know the exact condition of each colony in the apiary, without opening them. We can ascertain if they have their full number of combs, if the queen is light or dark colored, etc. As each slate is numbered, we shall take them off in the fall and lay them away until next spring.

J. M. BROOKS & BRO.
Elizabethtown, Ind.

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My Plan for Registering.

You mention keeping slates for securing a record of each hive. Try my plan:

Take a piece of tin the size required, and bend two opposite edges ¼ inch, so that they will hold between them a card, piece of paper, or slate. A couple of tinned tacks driven almost home will be right to hang it on and keep the record from the weather. Put the number of the swarm on the back of it with a stencil. By this method you have a record in convenient shape for preservation. W. H. KIRK.
Waterbury, Conn., July 14, 1877.

New York Honey House.

By an advertisement in last month's JOURNAL our readers were informed that H. K. & T. B. Thurber & Co. were prepared to receive consignments of honey. Several inquiries as to the reliability of that firm led us to make examination, and discover that they are possessed of over a million dollars as capital to do business on, and are abundantly able to do the square thing to *all* who may consign honey to them. From a friend in New York we also learn that they stand high as to business integrity; and that Mr. T. B. Thurber is President of the New York Board of Trade. We say this only that bee-keepers may be fully posted as to the standing and reliability of the men they deal with.

Since our last issue, Messrs. Thurber have contracted for the entire crop of Capt. Hetherington, of Cherry Valley, N. Y., which is estimated at from 100,000 to 150,000 pounds. This is perhaps the largest single transaction in honey ever made; and will give Messrs. Thurber the control of the honey trade of America.

Let us say to bee-keepers: Don't ask for advances on your honey—sell outright. In the long run, all will find it to their advantage to do so. Holding honey on commission and selling after advances have been made on it will not generally be as pleasant as a low figure and a sale outright.

Separating Honey from Wax.

A correspondent sends to the Cincinnati *Gazette* the following directions for separating honey from wax:

> Put the honey, comb and all, in a tin pan on a moderately warm stove, adding to each pound of honey a tablespoonful of water. Stir it occasionally with a piece of wire when the contents of the pan are perfectly liquefied. It must not boil. Set where it can cool undisturbed; then pass a knife carefully around the pan to detach the cake of wax on the top, and rapidly, with great care, lift off the cake. Don't let it drain into the pan an instant, but place it in another utensil.
>
> Any one thus clarifying honey, will find, on putting aside the cake of wax, that the impurities adhere to the cake of wax, while the honey beneath is clear. If the honey should, in time, candy, heat it with a very little water sugar. Keep in jars tied up in a cool place. Break up the wax cake and wash it in cold water till cleansed of honey, then melt and strain it. To bleach the wax, boil it, after straining it, for an hour in plenty of water, in which use a few drops of chloride of soda. When quite cold, lift off the wax and leave it to dry and whiten in the open air.

FINN HIVE.—Keyes & Finn have sent one of their "Porous, double-walled bee hives" to this office. It was often called for by our visitors, and *now* they will be able to investigate it fully and freely. It has walls 3 inches thick, 9 frames, 11¼x12 inside, and 6 boxes. It is also accompanied by their "combined chaff ventilator and feed box." This we add to our museum with pleasure.

☞ Last year the all-absorbing question was: "What shall we do with our honey?" This year the wail comes from the Pacific Coast, and the all-absorbing question is: "What shall we do with our bees?" Thus do the ever-varying echoes salute our ears as "the seasons come and go" and the "ponderous wheel of time" moves steadily onward. What shall be the variation for next year no mortal now can tell.

HONEY PRODUCT OF SOUTHERN CALIFORNIA.—The San Diego *Union* publishes a review of the prospects of the honey crop, and says:

> Reliable information from all parts of the county and the honey-producing sections of adjoining counties, warrants the belief that the California honey crop of 1877 will be nearly a total failure. In San Diego County, which last year produced 1,277,155 lbs., we shall not suffer as much as neighboring counties, but the extreme dryness of the winter, the cold, late spring, and finally the recent extraordinary heated term, have nearly destroyed bee food everywhere. In the range extending from the coast back to the Cuyacamaca Mountains, from San Luis Rey River, bees have to be fed. Many apiarists have lost largely. In the mountain ranges, where there has been food and winter rains, the bees will make a small amount of surplus honey. Other ranges will at best, support themselves. Spring flowers and white sage are a total failure. The sumac and greasewood, now coming into bloom, are the only dependence to carry the bees through the season. As above stated, the situation in other counties is worse than here, and although it may be safely predicted that the honey surplus of the present year will be hardly sufficient to supply the San Francisco market.

Southern Notes,

GLEANED BY
W. J. ANDREWS, - COLUMBIA, TENN.

To our Friends.

We have made arrangements to furnish queens again by mail. We cannot send from our own post-office, but forward them by express to another office where we have them mailed. We have not learned of but one postmaster in the United States who refuses to take them, and that is our own. We made another appeal to the Postmaster General, stating that they were being forwarded in the mails from other points, but were unable to get him to revoke the order. We will continue to send by mail as long as we can do so, and hope the time is not far off when there will be a change of postmasters at our place, and that we can mail direct from our own office.

W. J. ANDREWS.

Queen Destroying Workers.

We had a queen, a few days since, which made regular battle with the workers, without any effort on the part of the workers to fight her. She would sting them, producing almost instant death. Has any one ever had a like experience?

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Jonesboro, Tenn., June 22, 1877.—"What kind of a hive do you prefer for this latitude?" ASA J. RICHARDSON.

[We have tried the Langstroth, Standard, Thomas, Triumph, American, and other hives, and greatly prefer the Langstroth. We now have nearly all our bees in that style of hive, and are changing to them as rapidly as we can.—W. J. A.]

Sparta, Ga., June 15, 1877.—"This is one of the best seasons ever known in Central Georgia for honey. Flowers, fruit trees, and the forest dripping with honey-dew."

W. H. GREEN.

[So it has been with us in Middle Tennessee.—W. J. A.]

Buncomb Co., N. C.—"Please tell me how to raise queens, so that I can stock my apiary." F. M. STOCKTON.

[First select a strong stock, catch and cage the queen, and lay her on top of the frames of the hive; then remove all the frames, brushing off the bees. Go to the hive you wish to raise queens from, catch and cage the queen of it, then remove all the frames it contains, brushing off all the bees; now into this hive insert the frames taken from the first hive, and place those taken from the second hive into the first hive. Release the queen of the second hive and allow her to crawl down among the bees. Destroy the queen of the first hive, thus leaving it queenless. The bees will immediately commence the construction of queen cells. On the 9th or 10th day, open the queenless hive and remove all the queen cells but one. Remove as many native queens as you have cells and destroy them, giving to each hive from which you have taken a queen a cell. In about 5 days give to each a card of brood, this will prevent their swarming when the queen leaves the hive on her bridal tour. This will hybridize all your stocks, and furnish you with pure drones, repeat the operation and you will soon have all your colonies Italianized.—W. J. A.

Miami Co., O., June 21, 1877.—"We have 10 colonies, and while I am writing 1 colony is swarming. Do give us all the information you can concerning them. Perhaps we will send for a queen soon. Some of ours are a little mixed with Italians; we will try to send for a pure one soon."

ROSA ARNOLD.

[We will cheerfully respond to any specific questions regarding to bee-culture, but cannot give *general* information in this department. I would advise you to subscribe to THE AMERICAN BEE JOURNAL.—W.J.A.]

Elkmont Springs, Tenn., June 19, 1877.—"I have a doleful tale to tell you about my apiary. The cyclone, of which doubtless you have heard, made sad havoc with my hives. Think of lifting a strong walnut hive full of honey, weighing 100 lbs., and wrenching it into fragments and strewing the debris for 300 yards. I have seen nothing of the frames of the hive containing the queen received from you the day before. Through the assistance of friends, I have 8 hives with damaged combs, some of them are queenless. Please send me another queen; would be glad to have a couple, but am not financially able to pay for them now. I have almost recovered from physical injuries received, but have a little boy still confined to his bed. Our loss will amount to several thousand dollars."

W. L. MOORES.

[We deeply sympathize with friend Moores in his trouble, and send two queens; he will please accept one as a present. A friend of ours in this county met with a like calamity. He was the owner of 100 hives, and had them scattered in every direction. Hives heavily laden with honey were landed in the tallest forest trees.—W. J. A.]

Elkmont Springs, Tenn., June 28, 1877.—"Queens came all right. Accept my unfeigned thanks for nice present. Such kindness from disinterested friends goes a great way to reconcile one to our calamities. My bees since the storm seem to have redoubled their energies to repair damage to their houses. If we could show the same enterprise in repairing our houses we would be all right soon. However, our work is progressing and will be open again in a few days." W. L. MOORES.

[To know that our act of "disinterested friendship" is duly appreciated, is to us far better pay than money. If we would make the proper application we might learn many useful lessons from our bees.—W. J. A.]

For the American Bee Journal.

Bees in Georgia.

FRIEND NEWMAN—While so many of the shining lights are putting in their appearance, perhaps it would not be amiss from one that shineth less to send you a few items from the "Sunny South," and more especially from Northern Georgia.

This perhaps has been one of the best honey seasons ever known in this county. The spring flowers opened well and afforded a fair supply of both pollen and honey, and swarms became very strong at an early day. On April 27th, a honey-dew was discovered, which increased and continued until June 13th. Everything was covered with honey, the thickest and finest flavored of any we ever saw. There were no dews of any account in the evenings during this whole time, making the honey-dew still thicker and harder to be obtained by the bees. If we had light dews in the evenings bees would have gathered twice as much as they did. They gathered enough. It was not an uncommon thing for young swarms to fill their hives and give 100 ℔s. of choice surplus, besides casting a swarm. The honey obtained was of a fine golden color, of beautiful flavor, and differing much in taste to any we ever before sampled.

HONEY EXTRACTOR BAFFLED.

In all our experience with extractors, we never before saw it "whipped." Mr. Clements, an attorney-at-law of this city, had about 20 swarms of bees filled so full of honey that he was compelled to remove it in some way. From his knowledge of the extractor, and the favorable reports given it by practical apiarists, he resolved to purchase the Peabody, and commenced work indeed, for work it was. He prepared his combs as is usual and commenced turning, expecting to see the honey fly like a shower of rain, but no honey came; he tried again and again, and the result was that the combs would brake before the honey could possibly be thrown from them. The honey was so thick that it was impossible for any extractor to remove it. After my friend had tried several hives with the same result he abandoned the whole thing in disgust, and offered his extractor for sale. He placed boxes upon his hives and will receive a fine surplus of beautiful honey. The cause of the honey being so thick was that there were scarcely any dews during the whole time. Had there been dews in the evenings as usual, the honey-dew would have been thinner, and bees would have gathered still larger quantities.

COMB FOUNDATION.

We consider the perfect success of this article a great advancement in the apicultural department, and places our branch of industry together with improvements already made, equal to those in other branches of agriculture. With 2 years' experiments with comb foundation, we don't see how we could well manage an apiary without it. Two years ago we purchashed some of John Long, of New York; it was the best we ever used. Last season we bought some of C. O. Perrine, of Chicago; it was too thin, and would stretch about 2 inches in 10. Our frames are 10x15 in.; we filled the frames and in the course of two days they had stretched so that we had a fine time of getting them out of the hive. When cut in small pieces they worked well in boxes.

FASTENING COMB FOUNDATION.

Much trouble has been experienced by beginners to fasten comb foundation. Take three parts of rosin to one of beeswax; melt together, and when cooled a little, dip the edges of the foundation in it and apply it to the box where needed. We never had but one such fall down. The rosin makes it so hard that it does not give by heat, like wax, neither can the bees knaw it off, as they often do wax.

ON THE BEES' FEET.

Mr. Morrison, of Corsicana, Texas, informs us that a large number of his bees are bringing in something clinging to their feet, of rather a golden color; a peculiarly shaped mass, which gives the feet the appearance of a cord tassel and prevents them climbing up the sides of the hive. He notices that no bees gathering pollen has this on their feet. The bees sent us with the substance clinging to their feet had something of the appearance of that sometimes obtained from the large milkweed. He also states that they had frequent and heavy rains about the time (May 18th) perhaps some of the readers of the JOURNAL have had similar experience.

A FINE YIELD OF HONEY.

Our friend Dr. E. C: L. Larch, of Ashland, Mo., writes us on the 12th inst., that he has taken 6,000 ℔s. of fine white clover honey up to date, and expects to take 5,000 ℔s. more. He has about 130 swarms. He says that, part of April and up to May 20th was unfavorable; since then it has been very good. Basswood with him was an entire failure. He lost no bees in wintering, or as some term it, in springing. His bees are Italians. Who will now say bees do not pay?

The honey season in the South is about over, and all are well pleased with their honey harvest. A. F. MOON.

Rome, Ga., July 17, 1877.

A HINT TO BEGINNERS.—Those who may desire to read up in the literature of bee-keeping, are advised to obtain the first Volume of THE AMERICAN BEE JOURNAL. It is worth five times its price to any intending bee-keeper. It contains a full elucidation of scientific bee-keeping, including the best statement extant of the celebrated Dzierzon theory. These articles run through all the numbers, and are from the pen of the Baron of Berlepsch. We have but a few copies left; price, $1.25, in cloth boards, postpaid.

Correspondence.

For the American Bee Journal.

Letter from California.

Mr. Editor:—If any of your readers still have a "hankering" to come to California to raise bees and honey, let them read the following and be satisfied to remain East.

That such a season as this comes only once in several years, the fact that it does come is proof enough to those who are here and are now suffering great distress, that California honey-raising is not all that fancy paints it. The light rains on this coast—extending over 500 miles from this county north nearly to the north end of the State—during the past winter came at such long intervals, that the moisture would all be extracted from the soil long before any succeeding shower. None of the rains wet down to moisture below; so, as old residents say, a crop never has and never will be made in this State unless the ground is wet down once at least thoroughly.

The first rain for ten months came on Jan. 13th. This started the plants and grass to growing. Feb. and up to March 10th, the manzinita gave a fair yield of honey, when all flowers failed until April 10th; when they, for 10 days, gathered enough for their daily wants. Since then and until now they have gathered probably not half as much as they have consumed. At the present writing the sumac and greasewood are in bloom, but they secrete no honey. Both the blue or button and white sage are total failures.

From this time on for 5 or 6 weeks the sumac may help us, but after that there is nothing until the rains of next winter bring us a new crop of flowers. Bees increased very rapidly in Feb. and up to March 10th, when the queens generally ceased laying, as there was no honey coming in.

Swarming began the middle of April instead of March as is usual. Probably 5 per cent. of the hives swarmed during a light flow of honey, and then the bees seemed to become perfectly demoralized. Probably one-half of the old queens in the strong hives were killed by their own bees in the effort to make them lead off a swarm. A very few of such colonies threw off large first swarms accompanied by young queens. Of 20 swarms from 300 old stocks,more than half deserted their hives in from 2 to 6 days after being hived, and went to the mountains—to starve. I gave new swarms two full frames of honey and brood of all ages, and had them go off within 3 days, not leaving a vestige of brood—all eaten, or, if too old, thrown out.

I do not think I have had a foot square of new comb built in my apiary this year; when a year ago, for some moths, an ordinary swarm would fill its hive with new comb in 10 days. Many old stocks used all their honey long ago and have been kept alive only by constant feeding. All stopped breeding and threw out not only drone but worker brood and destroyed their drones. At the present writing, more than half the bees in this county, so far as I can learn, are in a starving condition, without an ounce of honey or a cell of brood. All the stocks are weaker now than in Nov. The president of our county association told me a few days ago that bees were dying of starvation all along the coast.

A few apiarists are feeding regularly, hoping each succeeding day will find the flowers filled with honey, but only to be disappointed. Some say the reason the flowers yield no honey, is because of the peculiar electrical condition of the atmosphere. My theory is *want of rain.* Do not think, from the remark on the electrical condition of the atmosphere, that we have thunder and lightning. I have been here over 2 years and have never seen a flash of lightning nor heard a peal of thunder in all that time—but wish I could.

At a large apiary not far from me, the owner made up 60 colonies by division from April 1st to 10th. Want of honey since then made half die or desert their combs, while most of the remainder, by addition or uniting, are in poor condition. You in the East have trouble to carry your bees through your long, cold winters. We here would now like to know how to get ours through our long *hot* winter.

The bee men here are mostly poor and in debt, expecting by this year's crop to get out of debt, but they are now worse off than ever, with an almost certain prospect of losing all their bees. But then we are no worse off than other classes. Sheep are about the worst stock one can have now. Large numbers have starved, and whole flocks are offered at 5 to 20 cts. per head. Cattle and horses, too, are too low in price to call it a price. A large herd of cattle near me lost 30 per cent. since last Nov., but have just been sold for about what their hides are worth. Of grain, there is none, generally, though here and there in some favored valley or moist land, fair crops are secured. Rabbits and quails refuse to breed; in fact extermination of life is the order of the day.

Those of you who live within half a day's journey of any other man, and can carry half your bees through winter, and get fair crops of honey from the remainder, ought to be satisfied. If not, come here and you can buy any apiary for what the empty hives and material are worth and have the bees thrown in. With honey in the comb as it sold last year, at 6 to 9c., and extracted at 4½ to 6c., the producers have lived only a hand to mouth existence.

San Diego Co., Cal. G. F. Merriam.

For the American Bee Journal.

Dollar Queens.

Although the subject of the production of cheap queens is far from being exhausted, I do not deem it profitable or even entertaining to pursue the subject much farther. Mr. Dadant set out with the assertion in the May number, that they were unprofitable to the producer and then branched off upon their inferiority.

My articles in the June and July numbers were intended to give those unacquainted with the queen-rearing business some idea of their production in large numbers, and then judge for themselves of their quality. Mr. Dadant's rejoinder in the July number reminds me of the village schoolmaster in Goldsmith's Deserted Village: "And e'en tho' vanquished, he could argue still." I cited the colonies offered by Mrs. Grimm, that all your readers could see for themselves and for illustration, and I was aware of the distance and of the two lines of express carriage between Jefferson and Murfreesboro. For bees, full colonies in Langstroth hives, 10 frames and 3 honey boxes, or 21 frames to the hive, I had them offered to me, the present season, at $5.50 per colony, but did not purchase for the reason heretofore mentioned—I could buy cheaper. Parties thus offering were changing business and locality.

I reared queens, the present season, in April, and shipped young queens to Iowa, Missouri, Wisconsin, Illinois, and Kansas on May 20th. These were the first I sent north when Mr. Bingham's bees were "not gathering enough to support their brood"—Mr. Bingham's were certainly inferior bees. I sent bees to Ohio and N. Kentucky, in April, 1876, while Mr. Andrews was losing by early shipping. Has Mr. A. or any other breeder lost in shipping, by cold or otherwise, this season?

I do not feed by nuclei, *i.e.*, with feed pan or tin and bottle feeders containing honey or syrup. Give them honey at once and enough in their combs, and if in a poor season they get short, exchange their empty frames with a full colony. This feeding is less trouble and not so inviting to robbers.

We can choose the male for our bees in Tennessee, just as well as they can in Italy. The mating of the yellow bee in Italy takes place in the open air, the same as in Tenn., and, from what I see, there is a greater variety in Italy, or as great, as in Tenn., and as many chances for impure fertilization.

What does some of the honest brethren who have imported queens say?

"I have imported but few from Italy, and among the number only one that I consider pure, though very dark, as in fact were all I ever imported. I have never had one to breed perfectly bright queens until the 4th generation.....My first and second importations direct from Italy proved a failure, the queen died introducing. They were but very little, if any, brighter than common black queens. The first one I ever succeeded in introducing, I commenced rearing from her as soon as she began to lay, fearing the bees might remove her—of course, taking it for granted she was pure, because she was direct from Italy. When the young queens began to hatch, some were as dark as black queens and some brighter than the mothers. But, lo and behold! the workers began to hatch, some with one, some with two, and about 1 in 100 with 3 bands."—*R. M. Argo, in Bee World.*

"All impartial writers and travelers tell us that there are two kinds of bees in Italy. ....Varro and Columella also speak of two varieties. Klein, a German apiculturist and writer of distinction, says: 'At this day both varieties are met with in various parts of Italy.'....In Oct., 1875, I received an invoice of queens from Milano, Italy, and among the lot was a very dark leather-colored queen that produced progeny badly mixed. At least one-tenths of her progeny were as black as any to the 'manor born.' They had no signs of the bands that characterize the pure type.....The most of Italian queen-breeders do not rear all their queens, but purchase them from the country people, and as bee-keeping among the Italian peasantry is conducted in the most careless and slovenly manner, very little attention is paid to selection."—*Dr. Brown, before the N. E. B. K. Society, N. Y.*

I could fill the JOURNAL with evidence such as quoted, but the above is sufficient.

Mr. D's questions are not perplexing, and not at all offensive.

1. If Mr. D. has not increased considerably since last season, there are a few young and many old bee-keepers in Tennessee who outnumber him in colonies 2 to 1, all Italians. There are many black and hybrid bees here too, as in Italy where imported $7 Italians come from. These we do not sell at all, for any price.

2 and 3. If there be no dishonest men in the $1 queen business, why suppose for hypothesis. I have yet to see one of them published for dishonest transactions. Their queens are warranted Italians, and being sold before tested, the progeny is not warranted.

I am in the business to make money, and try to give value received to all who deal with me. If I were loosing money, I would find it out without being told, and abandon it at once; and here, readers of the AMERICAN BEE JOURNAL, let me say to you what you already know, Mr. D. is after greenbacks too, and whenever you see these *pro bono publico*, all for the people and for pleasure, regard them with suspicion. It is not human nature for men to pursue and continue a business that all the time is loosing to them. When there is profit there is a corresponding amount of pleasure; is that not so? W. P. HENDERSON.

Murfreesboro, July, 1877.

California Bee-Keepers' Convention.

The chairman, Mr. Fox, called the meeting to order, and stated that the peculiarities of the season required a meeting at this time. He stated that the questions to be discussed were: "What shall be done with our bees," and second, "The assessment made on bees," stated at $2.50 per hive.

Minutes of last meeting was read by the secretary, Mr. Balcom. Membership 45. Approved.

The report of the board of directors was read, and approved.

Mr. Fox stated that some of the board had had liberal correspondence touching the honey interest, both in America and England, and that they had agreed to reduce the number of grades. He also referred to the conclusion of the board as to a uniformity of packing cases, mode of arrangements for grading, packing, etc.

Mr. Harbison said in response to a suggestion, that he attended the meeting of the bee-keepers of Los Angeles county, and said that the idea of co-operation was suggested there of the five bee counties, and an organization made, but on account of the failure of the honey crop, nothing further has been done. He said the bees up there were dying rapidly, and the matter must stand there for the present.

Some communications were reported, most of them inquiring as to "what shall be done with the bees?"

Mr. Fox said the inquiry was urgent to learn something for future action.

Mr. Harbison had visited five of his apiaries, and examined the cases and the feed carefully, and found only a small appearance of honey, though the breeding was going on well. The depopulation noticed was marked, many of the bees dying. He believed that where sumac abounded liberally, the bees might live, but in other, and most places, the probability was that they will have to be fed or leave them to their fate. He thought the weak and storeless hives would have to be destroyed, and recommended sulphur if necessary to be used to kill them. He recommended the saving of only a limited number of bees, and that care be taken of the comb. At his Valle de los Viejos apiary, his highest apiary, bees were not doing as well as elsewhere. He did not think he would get a good case of honey; and suggested that his course be adopted. His letters from Los Angeles stated a large loss on bees, and that little or no honey would be made there.

Mr. McAlmond said he had a few hives in the Campo district; had examined several hives and found only a little honey in the main frames.

Mr. Frazier said Mr. Harbison's statement agreed with what he had observed on his apiary, at that many deaths among the bees had been noticed. In one or two hives was a very little honey. Before the late east wind, bees were doing a little better; that wind seemed fatal to them.

Mr. Blaidell, of Poway, said a few of his bees had made a little honey up to two weeks, and were doing something better now. He thought that a half to two-thirds of his bees would be able to live.

Mr. Harbison stated that, so far as he had observed, the little honey making was of the lowest grade.

Mr. Mitchell, of Poway, said he found a little honey in his hives.

Mr. Harbison said, in reference to swarming, that there had not been on his apiaries over from 6 to 10. The same was true of Mr. Clark's apiaries, and he thought his report a fair one for all sections.

Mr. Morse said he had heard that the apiaries about Julian were doing well.

Mr. Bowman, of Bear Valley, said the bees there were not doing much. He thought many of them must die, and that they had had very few swarms though they breed well. His best hives were not half filled, and many had no honey in them at all. The season would last about 10 days more.

Mr. Fox said had conversed with gentlemen from San Dieguito. One gentleman thought he would be likely to save 100 out of 300 hives. Another, reported his apiary doing better, but he had a field of alfalfa. Around Wentworth's, the feed had been eaten up by the sheep, and the apiary had to be removed. At his own apiary, in a few hives, the young bees were doing pretty well. Mr. Lawson's apiary reported some work in the section boxes. Mr. Bergman reported his bees doing pretty well, and thought some honey would be made.

Mr. Terry spoke of L. M. Ritchie's apiary, and said it was doing very well. His apiary is in San Bernardino.

Mr. Harbison attributed much of the lack of success to the late east wind.

Mr. Mitchell, of Poway, said that he thought his bees would make a living—the strong making enough to feed the weaker ones, but no surplus.

Mr. Harbison thought the sumac might last 2 weeks, but the wind of to-day seemed to be detrimental. He thought if the average of the season could be run up to 3 weeks, most of the bees might be saved.

The secretary said he was questioned daily as to the manner of feeding the bees, and wanted information.

Mr. Harbison thought there was little danger of contagious disease. The county was free from foul brood. He advised the use of sugar for feeding, if feeding be necessary. He did not fear any other diseases, as they had at no time to be closed up for a long while. He thought the comb honey of the county a safe feed, and thought a pound of sealed honey better than raw honey. Let the bees accumulate and depopulate, and then feed rapidly. He mentioned sugar candy as a feed (reduced), and said it was recommended in other quarters, but he had had no experience. Pure honey to be fed to bees should be diluted according to the season. The more it is diluted, the more young bees will be brought on. Candid honey was not objectionable.

Mr. Mitchell said his practice was to set the candid honey into his hives, and it worked well. He said it served to encourage the working of the hive, and he thought his bees would be able to live.

Mr. Harbison said the quantity of honey necessary to feed the bees was hard to determine. The honey seasons had usually closed about Sept. 15th, except in 1875. The bees ate from a half to two-thirds in the hive, representing 40 to 45 ℔s. He thought 25 to 30 ℔s. of honey would be necessary, say from 1st Sept. to Feb. Five frames of honey, he thought necessary to carry them through, and then a little feed might be required, if the flowers were late. It was better to reduce stock than to go to the expense of feeding. A hive that would not support itself was worthless, and should be destroyed. He believed there were too many bees on the range.

One gentleman said he had knowledge of 75 wild bees, and he intended to take the honey for his bees.

Mr. Harbison did not believe that the fumigation of comb would have an injurious effect for further work. He did not know, but thought sulphur would not kill the eggs of moths.

The tax question was then discussed, and a committee appointed to get the assessment reduced. They waited on the supervisors to get it reduced from $2.50 to $2 per hive.

A. Lovett was elected a member.

From the above and other information, the Executive Committee draw the following conclusions:

1st—That a considerable proportion of the bees in this county are now almost destitute of feed, and will not be able to provide stores enough to winter on.

2d—That at the close of the honey season, which may occur earlier than usual, all stands not containing at least 5 frames full of honey will require to winter them, enough honey to make up that amount, or say 25 ℔s. in all.

3d—If any stand, at the close of the season, contains no honey it will not pay to attempt to save it by buying feed; but each bee-keeper must use his own discretion in regard to how much he can afford to feed.

4th—Comb honey is the best feed, and if in main frames, should be placed in the brood chamber in the usual way. Extracted or strained honey is the next best, and should not be much diluted during the breeding season, or it will be used to feed the brood, and thus stimulate unnecessary breeding. Sugar may also be used either in a syrup by mixing with water (being careful not to let it get sour) or made into candy. In all cases the food should be placed in the hive, and the brood chamber is the best position.

5th—It is not advisable to import honey from other places, as there is danger of introducing disease; but subjecting the honey to a boiling heat will destroy this danger.

6th—If it is necessary to destroy some colonies in order to save others, it should be done by smoking them with sulphur, and not under any circumstances allow the bees to run away and become wild.

7th—Empty comb can be best protected from moths by the bees themselves, but if kept in a house should be occasionally fumigated with sulphur to kill moth grubs, but this will not destroy moth eggs.

The Executive Committee respectfully offer the following suggestions:

1st—That every bee-keeper keep close watch of his bees, and as soon as they fail to gather as much honey as they consume, decide upon his course of action, and act promptly.

2d—If he is unable or unwilling to supply food so that the amount of honey in each hive shall be at least 5 frames, or 25 lbs., he destroy part of his colonies and transfer the combs containing honey to others, so as to give each that he intends keeping, the amount named above.

3d—If he decides upon feeding, it be by one of the methods named above, taking them in the order of preference named.

4th—Every swarm of wild bees should be destroyed as soon as possible, in order to use their honey, and also to preserve the feed for our apiaries.

5th—Empty comb should be carefully examined, and when not left in the hive, be packed away, and fumigated occasionally with sulphur, so that it can be used another season.

The committe strongly urge the policy of not attempting to carry through more bees than can be fully fed, otherwise all may be lost or come out in the spring in such a poor condition as to be unprofitable next season.

Chas. J. Fox, *Pres.*,
E. W. Morse, *Vice-Pres.*,
R. G. Balcom, *Sec'y*,
Executive Committee.

For the American Bee Journal.

California Honey Crop.

Thos. G. Newman—*Dear Sir:* I enclose you the minutes of our convention. I give an idea of the condition of our bee interests. As there are over 22,000 stands of bees in our county and we exported last year over 1,250.000 lbs. of honey, which netted us over $100,000, the failure of our crop is a serious matter. It is the first time in the history of bee-keeping in this part of the country that such a thing has occurred and arises from a combination of unfortunate conditions.

Last winter was one of the driest on record; this spring the coldest and most backward; and when early in June we had partially got past these drawbacks, there came a "hot spell" beating anything on record. Thermometer ranged during five days from 102° to 115°, back from the coast where most of our apiaries are, though in San Diego it was only from 90° to 95°. And so excessively dry was the air that vegetation was scorched. Within a few days past, it has been damp and cool and bees are doing much better as the wild sumac—one of our best honey-producing plants—is in full bloom.

Bee-keepers in the "States," as we call all east of the Rocky Mountains, made a good deal of complaint last year of our overstocking the markets with honey, inducing a fall in prices. They will have nothing of the sort to complain of this year, for I do not believe enough will be produced in California to supply home demand, nor that a single car-load will be shipped. We are out of the market this year as competitors. And I think our stocks will be seriously reduced, and a good many retire from the business, so that even next year we shall not seriously interfere with Eastern trade. We are opening up markets nearer home, Arizona, etc., as the exorbitant charges of the Central Pacific R. R. almost preclude us from shipping East by rail. We shall try and make arrangements another year to flank them by shipping in another way.

Your Journal is much read and liked here.

Chas. J. Fox, *Pres. S. D. B. K. A.*
San Diego, Cal., July 11, 1877.

For the American Bee Journal.

Odds and Ends.

Friend Newman—I am so busy at the present time that I can't find time to write separate articles in reply to several communications that had reference to me in the July number.

Mr. Frank Searles says: "I will say to friend Alley that my bees do not raise drones in winter." Then why did he say that they did? The queens I sent Mr. S. were exactly the same as those sent other customers that have been spoken of so highly in the Journal. I will say to Mr. S. that I do not ship queens until they have laid a small comb of eggs. Mr. S. says all he wants is fair treatment. I was not aware that I had treated him otherwise until I saw it in the Journal. I ask only fair treatment myself, and I do not consider that I was fairly treated when he sent the statement about the queens sent him, without first writing to me about it. He never wrote me one word or even acknowledged the receipt of them. I have no doubt that the queens sent him were just as good as any sent out last year. If their fertility was destroyed, it must have been done after they left me.

DRUMMING OUT BEES.

Some one has requested me to explain in the Journal how I drum out or introduce a queen by drumming. In the summer when the hives are full of bees, I find it less work to drum out a queen than to look over the combs for one. I drive the bees up in the cap, when hives have caps and honey-boards, and proceed as follows: First remove the boxes and honey-board with as little disturbance to the bees as possible. Then blow the smoke of a burning cotton rag in at the entrance, at the same time drum on the side of the hive to alarm the bees and make them fill themselves with honey so that they will be good natured. Keep the drumming up for 10 minutes, but don't drum nor smoke much the first five minutes, as the bees would run up before filling their sacks and would be as cross as hornets. Alarm them just enough to make them good natured, and then drum smartly and blow more smoke at the entrance. Turn the cap over and look for the queen. If not found drum again and continue so till she is driven out.

If found, remove her and cover the bees over with a cloth or anything that will keep them in the cap, and then treat them to tobacco smoke, but don't give them too much. Blow in a little and let them rest awhile, and if they are disposed to fly when the cloth is removed give them more smoke. When they are quiet put the Italian queen in and shake them down in a bunch in one end or corner of the cap, so that the queen will be under the bees. Let them remain so until you have smoked the bees in the hive. The idea is to make all the bees smell alike. You can so deceive them that they won't know one queen from another. If this is done at night (best time just before sunset) the bees can be turned on the frames, the cap put on, and the honey-board replaced in the morning.

Mr. Dadant says he has tried the above method several times, but with only partial success, and further says: "a queen is never safe by this method when honey is scarce, for you cannot prevent strange bees from joining those drummed." Probally a queen is never safe the way he performs the operation. He certainly does not work right or he would succeed every time. I don't remember of ever having one destroyed introduced in this way, and I have introduced hundreds of them by the above method, and at all seasons of the year, say from March to November. As to strange bees, all the bees are strange to the queen, and all strangers would be introduced at the same time the queen is. I think if strange bees join those drummed that they would stay and not leave.

I will guarantee to introduce all your freshly-imported queens by the above method, and not lose one; I care nothing about the smell of them, nor how scarce honey is, and I am quite positive that I can do it successfully every time. I wish Mr. D. was close to me so that I could show him how to do it, as he would certainly succeed thereafter. Will Mr. D. try the following plan and report through the JOURNAL?

Unqueen a stock of bees, and in just three days or 72 hours thereafter smoke the bees in the hive with tobacco smoke, first placing the cage containing the new queen over one of the entrance holes to the boxes, or in any place where she will be scented the same as the other bees, and then let her run in. Very little tobacco smoke will do. I feel sure that Mr. D. and others will do it successfully every time. The queen cells that have begun will be abandoned and the new queen favorably received. I do not think that one queen in 1,000 would be lost by this latter method, no matter by whom introduced. I have introduced hundreds by the former method, and many New England readers can testify that it was done successfully.

REPLY TO MR. BENEDICT.

A few words in reply to Mr. Benedict, he says: "Friend Alley cannot produce a single word from my pen advising him to purchase queens of me." I can produce several words and letters from his lead *pencil* praising his stock and advising me to get some of it. The two queens sent back to him were returned in the same cages they came in, and I can prove by the P. M. that I did not leave the office before I re-mailed them, and I can also prove by the same official that two of the queens were black and but one was yellow. Mr. B. desires it understood that the same queens he sent me were not the ones returned. I wonder if any one supposes that I would send a man 2 yellow queens for 2 black ones? He don't deny that they were not yellow when they got back, as he got his big bee-keeping friend to look at them and they both pronounced them yellow, but about the purity neither of them had anything to say. H. ALLEY.

For the American Bee Journal.

Two Queens in the Same Hive.

I will now continue about the two queens in one hive. In February I found a queenless colony; in my distress I thought of the two queens in the same colony. I examined them and found mother and daughter happily together. I took the daughter with sound wings and introduced her into the queenless colony. About the first of May, I stood in front of the hive in which the wingless mother dwelt; I saw with astonishment a young queen returning from her bridal tour, entering the hive. The next day I saw the wingless mother and young daughter together on the same comb. A week after, I took the young queen out, having seen her laying eggs and made an artificial swarm; and now a third daughter is living together with her wingless mother, who is still strong, hearty, and prolific. I will inform you further on this subject as I will soon remove the young queen and look for farther developments.

Shelbyville, Ky. FRED KRUEGER.

For the American Bee Journal.

Queens Laying in Queen Cells.

MR. EDITOR:—Let me suggest an experiment to those who think the queen lays in queen cells. Select some hive where the comb is old and filled with bee-bread and unfavorable for cells. Then take out the queen and about the hive insert a nice new frame of worker or even drone comb that is filled about half way down and known to contain no eggs. In 2 or 3 days you will have plenty of queen cells with eggs at the bottom just as queens lay eggs. And if you wish to go a little further you can easily demonstrate that bees will carry eggs in off from the front lighting board, and raise queens from them. I once had a perfectly black colony steal an egg from some other hive, or get it elsewhere, and raise a beautiful pure Italian queen—no mistake about it at all.

STATES FOR HIVES.

To keep a convenient record of the internal affairs, I hang a slate on every hive. I save an immense amount of work and uncertainity by it. A considerable history of each colony can thus be kept from date to date without much trouble.

PORTABLE SHADE COVERS.

I make convenient, portable shade covers for my bees by nailing ceiling to cross-strips, similar to common batten doors. Take small nails, burn and clinch them and you will have a good cover 3x4 ft. for 25 cts. To keep the light thing to its place on the hive, so as not to change the appearance of the surroundings to the bees and confuse them, I drive a stake into the ground near the hive and bore a hole into the shade cover and slip the latter down over the former. It is the best way I have ever found to shade bees. I like it better than tree shade, because you can remove it and give the hive the sun when you wish, by simply lifting it off.

RENEWING COMBS.

A colony of bees should be allowed to renew at least half of their combs every year. To do this in the best way give the first swarm half of the combs, alternating them with empty frames. Then give the old hive a young fertile queen and alternate her combs with empty frames likewise. In this way you will get mostly worker comb, and all of it nice and straight. Of course all apiarists who give attention to their business keep fertile queens on hand to supply colonies that need them on demand.

Chilicothe, Mo. J. W. Greene.

For the American Bee Journal.

Straws.

Basswood is giving down, never more abundantly; 240 colonies to relieve of their superfluous stores. Must say a few words about

COMB FOUNDATION.

I have a fine lot of pure bright yellow, the first pure I have ever had. This is better than yellow wax and seresin; yellow wax and seresin is better than pure white (bleached) wax; bleached wax is better than wax and paraffine. Bees will struggle with all of the above; perhaps practically successful with the pure yellow wax, as far as boxes are concerned, for guides. But how about brood comb-foundation? Well, all who cannot get straight combs can call it to the rescue as guides, 4 or 5 cells deep. How about full frames of it? Well, put it in as straight as a board, and it warps when the heat of the hive comes to bear upon it. A swarm will fill a set of frames quicker without it, and bees will build drone cells upon it when they choose. I have a precious sample to prove to the optics this latter assertion. Finally, to have all cells started before any are a fourth finished, is unnatural, and all cells made thus will be ovate and probably turn out bees that get through the fence like the greyhound hogs, by turning up sidewise. So far, not an egg in any comb foundation.

But reader, the above is only my first trial of pure beeswax. Others do better, and perhaps I shall before the Journal comes to us again. I will report.

CHEAP SUPPLIES.

A pair of boots may be worth $6 and bought for $3; a pair may be worth $12, and bought for $12; a pair may be worth 50 cts., and sold at the low price of $1. I once bought some good queens at $1 each. I may buy some more of them. I may pay Mr. Dadant $7 or $10, or whatever he asks, for an imported one. All may give satisfaction. But nothing less than about $2 to $2.50, first cost, invested in a complete bee-hive will do me.

Mr. A. I. Root, of Ohio, says that a man in Missouri is carried away with his section frame, while Heddon rejects it. The last part of this is true; probably the first part is also true. My advice to the man in Mo. is, "if a feather will tickle him, preserve the said goose quil." I have that sample frame, just like the one the Mo. man has. This one is worth more than $1 to me, or more than the other 999. Just like it, because it and the future are going to prove that I was right, and the Mo. man and Mr. Root were wrong, I think. If I have no occasion to reject this frame, Mr. Root will have no occasion to ever improve it. Let us wait and see if bee-keepers demand such improvements. If they do, will it be criminal for me to be first, or among the first to bolt?

In regard to Italian *vs.* black bees, I am coming to some satisfactory standpoint in the matter. I find more difference between the value of different strains of blood, in either race, than between the two races. When we compare the virtues of the best strains of both races, the strain of Italians I now have are the bees I shall keep in the future. If a man is favored with a choice stock of black bees, the bright Italians—such as I have had till this season and part of last—will fail to give satisfaction. On the other hand, if he has such black bees as 5 stocks I handled lately, most any Italians will please him. To me, this accounts for honest difference of opinion.

James Heddon.

Dowagiac, Mich., July 12, 1877.

California Honey Interests.

READ BEFORE THE LOS ANGELES ASSOCIATION.

In nearly all new countries the imports exceed the exports. The croakers claim that Southern California will for years to come consume more in value than is produced, and it may seem to be a correct conclusion, if we are to judge from the productions of this present season. Last year we had a surplus of honey in this section—the sage belt—of about 2,500,000 ℔s. of the finest honey ever thrown on any market. This was regarded by some as an unfortunate thing and an over-production that could not be disposed of without sacrifice; but by a little well-directed effort a great part of this surplus has gone to the different countries in Europe, and as far as I can learn, those who exported it have made good profits by the experiment. San Francisco has made her share of profits out of this industry, while it could have been managed with much less expense if our own trading people would have created these new markets.

This is an industry in which all classes should interest themselves who have the prosperity and welfare of this section of the State in view. It is a well known fact that the exports from a country create new capital in it, greatly in excess of the money directly received. The honey-producing interest is of much greater commercial importance than many suppose, and requires a greater outlay of capital. Even some of our own citizens who have not given bee-keeping much thought have the idea that a good share of our honey is taken from hollow trees and caves in the mountains by a class of men known as "bee hunters;" while the truth is that appliances and lumber to operate the business in an approved manner are very expensive, beside the watching and care takes time, and the old adage tells us "time is money."

This season promises an unusually short crop, and those who have material, etc., on hand for operation should not feel like making undue sacrifices, but stand firmly through this trying ordeal, working persistently to reap a rich harvest when it does come, and all should have faith in the future of this industry, if managed honestly, economically and skillfully, and during the present season, while we are besieged by those twin foes to bee-keepers, drouth and scarcity of forage, let us sing, as we work, that appropriate air, "Hold the Fort! Hold the Fort!" A. J. DAVIDSON.

How we may Improve our Bees.

READ BEFORE THE MICH. CONVENTION.

Although this subject was indicated to me by Prof. Cook, your president, some may say I improve the opportunity to exalt the Italian bee. The fear of such imputation will not deter me from saying what I think to be true. The movable-comb hive, as well as the Italian bee and the bee business itself have their detractors; yet these attacks will never bring us back to the common box hive, or to the common bee, and still less will they make us quit our beloved pursuit.

The law of variations, in the way of improvement, is as eternal as matter itself, and as indestructible. It is a living force which all beings obey. It would be useless and impossible here to follow the natural transformations by which organic life has attained its present high condition. The natural changes continue even now, under our eyes, but so slowly, so insensibly, that we cannot perceive them any more than we do the moving of the hands of a clock.

In certain cases man has helped nature in its work, by urging forward the improvements which he considers advantageous to his interest. He has thus obtained cows with smaller bones, hogs with a greater propensity to fatten; but, less potent than nature, he was unable, so far, to change the organs, as nature did; yet the variations obtained by man, on certain animals, show that, if such is his desire, he can modify some of the animals to which his attention has not yet been directed. Man has increased the prolificness of the hen, of the pigeon, and of the domestic rabbit. He has increased the lacteal vessels of the cow; the docility, fleetness, and the strength of the horse, according to his needs or fancy. The dog, in his hands, has become a pointer, a shepherd dog, watch dog, bull-dog, or a King Charles'.

What he has done for these domestic animals and a host of others, he can do for the bee. He can increase in them what he thinks desirable, and diminish the peculiarities considered noxious. To obtain such improvements he ought to follow the course that he has followed for the domestic animals named.

How did man proceed to gain these perfections? By taking advantage of some slight variation in the animals, and by preserving and increasing them. Nature does not proceed otherwise. The animal whose variation is the most in accordance with the surrounding circumstances in which it lives will survive; while the other, if they do not find another quarter better suited to their organism will die. This is the law of "the survival of the fittest," found by Darwin.

Thus the sporting of individuals is the first step to improvement. Bees are not an exception to this law. We see a few of their sportings in their differences of color. We have the black, gray, Italian, Carniolian, Egyptian, Cyprian, and the Albino bees. These varieties are not confined to color. If we examine these different kinds we notice in every one of them some qualities or peculiarities not found in the others. If we find a kind having some desirable qualities of which the others are destitute, we can take advantage of the advance already obtained to increase the qualities desired; thus, to attain the desired end, we profit by all the way naturally traveled over.

It was such a thought which incited our breeders to import the English breeds of hogs and cows, the Asiatic fowls, the Percheron horse, etc.; and our bee-keepers to introduce the Italian bee in their apiaries. It is not my aim simply to commend the Italian bee; I will only point out some of the qualities desirable in bees, and how we can increase them. In my opinion the most desirable qualities to be coveted in bees are activity, prolificness, endurance, peacefulness, and at last beauty.

By activity I mean desire to work, and to fill the hive with honey; since honey is the aim of our pursuit.

By prolificness, we understand a kind of bee whose queens can fill the combs with brood early in spring, so as to have a large force of gathering bees in the honey season.

Both of these qualities would be reduced to nothing if our bees could not withstand our hard winters; so our bees should be endowed with endurance or hardiness.

The culture of bees would be very unpleasant and make our improvements more difficult to realize if our bees were always on the alert and ready to fight. I, for one, would prefer ugly bees to warring ones. Fortunately, beauty in bees is not incompatible with the other qualities.

Now the best method to improve our bees is quite definite. We have to procure the sort of bees which we consider the best, either the black, gray, Italian, Carniolian, Egyptian, Cyprian, or the Albino, to start our improvement; this choice being made according to our ideas, our knowledge, or our faith.

Having procured the best kind, we proceed by examining carefully every one of our pure colonies to find which of all are endowed with the qualities most in accordance with our notions. Suppose that we have 20 pure colonies; we select two of these—one to raise drones, another to raise queens. We take care of replacing all the drone combs by worker combs in every hive, and we profit by a warm temperature in March to slip a drone comb between two worker combs in the hive intended to raise drones. As soon as we have a few drones hatched, we begin to raise queens. To this end, we deprive one of our colonies of its queen, and exchange all its brood combs with a similar number of our selected colony; taking care to brush every bee from the combs before introducing them in the hives. Ten days after we can introduce, in other colonies rendered queenless on the preceding day, the queen cells obtained; or make swarms according to the methods described by bee books or papers, or dictate our own experience. During the whole season we note the colonies which seem to possess most of the qualities desired.

It is to be remembered that the best queens are those raised in a good season, in strong colonies, having a quantity of fresh pollen and unsealed honey. The queens raised in cold season, in small populations, or in needy hives, being generally poor and more apt to diminish than to increase the qualities of the race.

Twenty years ago, the publisher of a French bee paper advised his subscribers to exchange some of their colonies with others from some distant locality, to avoid too close in-and-in breeding. He accused consanguinity of producing lazy bees, or some degeneracy such as albinoism. In man, albinoism or albinism is a degeneracy. It is considered as such in some other animals. Never have I seen albino bees in my apiary, I am therefore unable to give my opinion on their merit. I desire only to remark that this peculiarity was observed more than 20 years ago.

According to my experience too close and too prolongated in-and-in breeding can produce laziness in bees, and give birth to queens whose progeny is not so sound as should be desired. I have had queens whose eggs would not hatch. I attribute this to consanguinity. In fact, since I have imported bees from different countries in Italy I have no such mishap to regret.

As to laziness, I have noticed it in my neighborhood. When I came to this country, the bees in a neighboring township were all the descendants of a single hive brought to this country by an old man, who had sold the swarms to his neighbors. Never in my life have I seen such lazy bees.

Those who have compared the Italian bees first introduced in this country from Germany, have remarked how much superior the first cross with the black was to the pure imported stock. These imported bees were the offspring of the Dzierzon stock. Dr. Dzierzon, the discoverer of the parthenogenesis was the first to introduce the Italian bee in Germany. Lately, in a meeting of bee-keepers, he boasted of having the same breed of bees that he had introduced in his apiary 24 years ago; he having introduced no other bee since. By selection, Dzierzon succeeded in raising the best colored Italian bees obtained so far. But, according to my opinion his selection, confined to color, was too one-sided; since his bees, as to activity and prolificness, are not able to sustain the comparison with the Italians in their native country.

The mating of these yellow queens with black drones, by infusing a new blood in their veins, originated the false idea that hybrid bees are better honey gatherers than pure Italians.

Some bee-keepers are searching for queens whose progeny is always uniform in color, under every circumstance. A queen whose daughters and drones will never vary is yet to be found. Sporting exists in all animals and plants. Take one hundred animals of the same kind, examine them carefully, and you will be convinced that no two are exactly alike. Without variation no selection could be possible, and it is to that quality that we owe the possibility of bettering our races by selection. I have a word to say about the other kinds of bees more or less recently introduced to notice among bee-keepers.

The Egyptian bee is no longer in question. Some Germans now praise a kind of bees from an Austrian province—the Carniolian bee, which inhabits the shores of the Adriatic Sea, opposite Italy. According to some reports this bee is more prolific than the Italians; according to others the Italian is a better honey gatherer. To try it I ordered 5 queens, and received 3 alive last fall. I would have been very much pleased with these queens had they been brighter. They are very dark, with very narrow stripes of dark orange on a few of their rings; but they were remarkably large. After 3 or 4 weeks of confinement in the boxes in which they arrive, the imported queens are small. The Carniolian queens were on their arrival here as big as queens in full breeding season. I shall watch them closely and report. A cross between the Carniolian and the Italian may prove profitable; but it would be impossible to detect the pure crossing unless some unforeseen peculiarity gives the means to detect the difference.

I cannot close my essay without saying a word about the marvel, the *ne plus ultra* of the present, past and future time, "the Cyprian bee." I have tried to procure this new kind but failed. I have given *carte blanche* to my correspondent as to the cost. He managed to procure the name of a man inhabiting Crypus Island and received from him 5 colonies; but they arrived smashed. It is very difficult to get bees from that island. There are no scientific bee-keepers, but peasants who keep their bees in earthen jars. These peasants refuse to sell bees, in the belief that the remaining colonies would be dissatisfied and desert the apiary.

Besides Cypress is an isolated island, having little to export and very few needs; no regular steamers frequent its shores. The shipping of these hives is risky; delays are long, and changes of ships are many. These inconveniences will always prevent the importation of Cyprian bees from becoming of great importance.

My friend is an energetic man; he has resolved to succeed in spite of all difficulties. Yet it is to be feared that this bee may prove to be far below its reputation, Mr. Cori, who introduced it into Germany. does not say in what it is better than other kinds, he only says it is more noble. He has succeeded in importing only 2 colonies from Cyprus, so far; and all the queens sold in Germany came from these, I could lengthen this essay by saying that our bees can be improved by increasing the length of their probsocis and by diminishing or the disappearance of their stings. But the power of man on these organs is nothing. What man can do is to profit of some sporting in this direction, sporting which may be produced naturally. For instance, if a bee-keeper notices that the bees of a certain colony gather freely from red clover, while other colonies remain idle, he can select this one and improve the variation by in-and-in breeding.

It is very probable that with careful management we can make our bees more peaceful, especially if we choose our quietest bees to breed from. It is probable also that a happy accident can produce a queen whose workers will have no stings. But both of these improvements are too doubtful to be aimed at in the present state of bee-culture. Yet every one of us should be ready to profit by these sports, if perchance they are produced in some apiary.

Let me end this essay by advising bee-keepers to remember the qualities that I have enumerated as desirable, and to work their bees accordingly. CH. DADANT.

Hamilton, Ill.

For the American Bee Journal.

Two Queens in one Hive.

Last Sunday morning, Dr. M. M. Clark, of Vermont, Ill., and myself went to look in one of my hives with an imported queen, and taking out a frame saw the queen. On lifting out another frame we saw another queen laying. Neither of them were young queens, for both were laying; and on an ajoining comb there were five sealed queen cells. The hive had 9 Quinby frames full of brood in all stages. These two queens were preparing to swarm.

We had occasion to go to another hive, and it contained no old queen, but a young one. The queen in the latter hive left it and went into the former. I left these 2 queens in all day, and then took one out, also the cells. This is therefore an instance of two prolific and perfect queens being in one hive, laying in the same comb, not 2 inches apart. HARDIN HAINES.

Vermont, Ill., July 4, 1877.

For the American Bee Journal.

Italian Bees.

Occasionally some bee-keeper sends his experience with the Italians to the JOURNAL. Mr. Porter, whose article appeared in the July number, seems to have had rather hard luck with them. I presume that I have been asked the following question 500 times, more or less, within 15 years: What is the difference between the black and the Italian bee?

I find a great difference in them. I generally reply to all such questions by saying, first, that they won't sting as bad as the blacks; and that one good quality should induce all who intend to keep bees to Italianize their black stocks. I find, too, that the Italians generally gather stores enough to keep them through the winter, even when the blacks won't under the same circumstances.

There are several other good points about them that make them superior to the black bees. The Italians require different treatment in the spring than the black or natives do—a fact I saw demonstrated as late as last spring. Occasionally I find a stock that will dwindle in the spring. Now to obviate this difficulty they should be fed in the spring. Commence by April 1st and give about six ounces of sugar syrup each night for at least 4 or 5 weeks. I have no doubt that a little stimulating of the above kind will prevent spring dwindling. When it is too cold for bees to fly, the hives should be shaded from the sun. Wheat flour put in shallow boxes and placed in a warm place, and not over 15 ft. from the hive, would be of great advantage to them, and prevent the bees from going a long distance from the hives in search of pollen when the weather is too cold for them to do so. If the syrup is made thus and a small amount of honey mixed with it to induce them to take it, I hardly think they will go out for water, as the water in the feed will answer all purposes for raising the brood.

I saw a stock of pure Italians, last spring, treated as above (can't say whether they had the flour or not) and they went ahead of all the bees in this part of New England. They swarmed before May 20th, and that is unusually early for New England. They have made several boxes of honey besides swarming, and I don't know of a hive that has done as well that didn't swarm. In fact I know of no stocks that ever did as well, considering how poor the honey season has been here with us. The feeding was an experiment, and proved a very good thing for the owner. The stock in question was a new one last year, and were supplied with comb foundation. But the best part of the whole thing is that the bee-keeper is a lady, living in Waverly, Mass. Unfortunately she lives in a poor district for bee-keeping. It would surprise your readers to see how neatly this lady sticks comb foundation into frames. I don't know but what there are some who can do as well, but there are none who can do it better. This lady used the first foundations I ever saw, and has made it a success. This lady knows how to write, and I hope she will soon tell your readers what she knows about bees and how she uses the foundation.

Methinks I hear some one say, what has that to do with Italian bees? Well, I like to praise the ladies when they deserve it. I have had 16 years experience with Italians, and I intend to Italianize all blacks that come into my possession as soon as possible.

One hive of black bees will sting 20 times where the Italians will not at all. I find the Italians much the best honey gatherers, the queens more prolific, and I never knew a stock of them destroyed by the moth worms, in fact, one seldom finds a moth about a hive of Italians, but plenty of them can be found about the blacks. Careless bee-keepers often complain of worms destroying their bees, those who keep black ones.

We have had an unusual poor honey season; very little, if any, honey was stored in boxes. We shall get no more until next May, when fruit trees bloom again. If it is not out of order I would like to say that a mad dog has caused the death of another man here in Mass. A man in Waltham, 20 miles from here, died on Friday, July 13th. He was bitten about a month ago in the nose by a small dog that he gave his son.

H. ALLEY.

Wenham, Mass., July 16, 1877.

For the American Bee Journal.

Italian and Black Bees.

I read with much interest on page 227, July number of the JOURNAL, an article by W. S. Porter on the relative merits of Italian and black bees. I like Porter's candor and frankness, and also his motto—"Let the truth come even if it does sear and burn, etc."

I agree with him in much, but disagree with him in the main point. I give him the blacks and keep the Italians. He says he has had considerable experience with black and Italian bees for the last 5 years, but only had an opportunity to give them a fair test during the last 2 years. I can say a little more than that. I have had experience with black bees for the last 20 years, and with the Italians for the last 11; and close experience with both for the last 10 years. I had both, for 3 years, side by side in my own yard; but for the last 8 years I only had the Italians in my own yard, but had at same time the care of several apiaries of blacks from 2 to 5 miles around. And from all my long experience I will try to show in what points I agree with the above writer.

1st—I agree that the blacks are better to store in boxes; that they are stronger in the spring, and are not so liable to be reduced by spring dwindling.

In the following points he will not agree with me: 1. The Italians are hardier. 2. They winter better. 3. They work earlier and later. 4. They are less inclined to rob. 5. They are moth proof, or nearly so. 6. They resist robbers better, and are far less apt to rob other hives. 7. The queens are readily found. 8. And they adhere to their combs more firmly. 9. They are more amiable, and no cowards.

As to the 1st and 2d points, I have wintered swarms of Italians so small that I would never think of wintering if they were blacks, as my past experience had told me. I have frequently had a queen with a pint of bees in March and April to build up into strong stands and swarm by June 1st, while I ever hardly had that quantity of blacks to build up at all.

As to the 3d, my Italians are in the field before I am up, so I cannot tell when they commenced, and from this you need not draw the inference that I am a late riser, for I can't afford it, but will say that I never caught my blacks at work before I was up. The Italians came in as late as 7:30, at this time, so late I could no longer see to read without a candle. I never caught my blacks at this either.

As to the 4th, I am never troubled with robbers in my own apiary, as the blacks are at least 2 miles from me; but while I had blacks and Italians my trouble from this source was great, frequently loosing a good many stands by it.

As to the 5th, my first few years with blacks was enough to discourage any beeman to loose so many with moth. The second year reduced me to a single stand by moth. The weakest Italians can withstand the moth. With Italians bid farewell to moths and robbers.

As to the Italians being more prolific, I am not sure of this, but I have had them fly out in winter and freeze by the hundred, while not a black bee would come to the entrance of its hive. On this point I praise the blacks as being more prudent. The Italians will venture out in an atmosphere that is certain to chill them to death; this accounts for their weakness in spring. I have said that blacks are better to store in boxes, but the Italians will store twice as much if you will give them plenty of room inside the hive, or use the extractor constantly. I will hear say that, without the extractor I would not keep Italians, from the fact they would store so much inside as to leave the queen no room to rear brood, and make it sure death to them in winter. I have lost many hives this way.

The main recommendation of the Italians is, that we sometimes have such poor seasons that blacks can hardly live, but as long as there is honey to be gathered within two miles the Italians will gather it. Now, a great many "dollar and cent" interest breeders of Italians, as well as many more who have no interest in their sale, will bear me out that the Italians frequently make enough to winter on in a poor season, while the blacks have to be fed to keep them alive.

The above is my truthful experience, uninfluenced by any interested motives in the Italian bee. The price of tested queens being brought down to $3, and $1 queens. I see no profit at these prices, but I see as much profit in raising $1 queens as tested ones at $3. I am not raising any for sale this year, but still fill orders to old customers, though I know there is no profit at these figures, unless one runs his whole apiary for queen raising and sells as fast as he can rear. One of our best and most noted queen-raisers said, in answer to the question why he had quit rearing queens, that every tested queen he sold cost him full $5, and as that was all he could get he had quit, as he could not afford to sell at cost. This same man tried $1 queens the last year; gave that up also as a losing business. Those breeders who sell tested queens at $3, only get from 8c. to 12c. per ℔ for their honey, while I get 20c. So you see my profit is honey not queens; and if I thought I would do as well with the blacks I would never pester myself with the Italians.

I will here give friend Porter a hint, as he thinks the blacks so much more profitable, he should introduce new black brood and so improve them. Let him exchange queens with friend Bingham, or Heddon, and if he will send me his address, I will send him some free of charge, if I introduce any more Italians for my neighbors this fall.

R. M. ARGO.

Lowell, Ky., July 17, 1877.

For the American Bee Journal.

Longevity of the Honey Bee.

What I am about to write will not appear strange to those of your readers who have kept bees for any length of time, but as many persons express much surprise when told that the life of a bee is only about five weeks in the summer, I have concluded to give an instance going to prove the truth of the assertion.

My experience with the honey bee is, that in a number of things they appear to follow a directly opposite course to that pursued by other animated natures. And in regard to their longevity they do certainly seem at first glance to transgress the laws of nature, for it is only when a stand of bees are surrounded by the most favorable circumstances that they live so short a time. It seems that one of the laws governing them is, that just in proportion to the prosperity of the colony do individuals die.

I have had this fact well demonstrated this summer. In the spring I bought 7 stands of black bees which I proceeded to Italianize. On May 10th I took out the black queens, and introduced the Italians caged. Those black queens had lots of brood and eggs. It took the eggs 21 days to hatch, which would be the 1st of June. At this time—July 10th—in most of those hives you can scarcely find a black bee, say one in fifty, but in two of them which became queenless, and were so for at least four weeks, there are a great many, say two-thirds. These different colonies were surrounded by exactly the same conditions, except that the two spoken of were queenless, which fact instead of causing the bees to die, as some persons believe, has caused them to out-live those which had queens.

I think the explanation of this is easy. A certain number of bees always remain in the hive, to regulate the heat, nurse, etc. Now as brood hatches and the young bees attain a certain age, they take the place of the older ones, which go out to work, and leading a more active life wear out sooner than their neighbors, who having no young bees to take their places, are necessarily compelled to stay at home and lead an easy, indolent one.

So we see that there is at least one lesson taught by the busy bee, viz.: that idleness is conducive to long life; which if we would do well we must avoid.

W. O. Langdon, M.D.

For the American Bee Journal.

Eggs Laid in Queen Cells.

Friend Newman:—In looking over the July number of the Journal we notice T. F. Bingham's article and your comments upon "Eggs laid in queen cells," and having just now had an item of experience which goes to show that, at *all* times at least, queens do not lay the egg directly in the cell which is to produce the queen, and that bees do move eggs to suitable locations for establishing their cells.

We deprived a stock of all their brood, young enough for queen rearing, and inserted a strip of comb containing eggs and just hatched larva, in an empty or dry comb, *a la* Quinby,—believing his theory the correct one for producing the best queens. In the course of 2 or 3 days, upon examination, we found the strip had fallen from its position and lay upon the bottom-board, and that the bees had started 2 or 3 cells upon another part of this dry comb. There could not have been any other eggs in this stock, for they were prepared especially for queen rearing. We find it unsafe to depend upon any fixed rules in bee practice, if it be done you will often slip up in your calculations.

One other point, a late writer (in the Journal, I think) says: "Young queens don't destroy other queen cells and their occupants, but the bees bite open the cells and destroy the inmates." This is an entire mistake, as I have too often lost cells in my lamp nursery; sometimes six or more in a night, and not a solitary worker around. Have repeatedly caught the royal ladies at their work, and have seen them curve their body and sting to death the rival specimen of royalty.

We quite agree with friend Heddon, that the Bingham is the boss smoker. We were so well pleased that we ordered a second one. Let no bee-keeper be without one. We have tried the Quinby, and for our use 'tis nowhere.

The foundation made by C. O. Perrine works well, with us, in the brood chamber, have not yet tried it for boxes.

The season has been short here; weather now so cold—plays mischief with queen-rearing rapidly.

J. Oatman.

For the American Bee Journal.

Honey-Dew.

My bees commenced gathering dark honey on May 12th and I soon discovered it was from that source. It has been most abundant on the poplar and on the oak, especially on that variety which has a leaf resembling the chestnut. I have seen a little on the sweet gum, dogwood, wild cherry and holly. I hear it has been quite abundant on the beech in some places, have not seen any myself on it this year. I have had no opportunity of observing the walnut or hickory. A gentleman says it is sometimes found in great quantities on the leaves of the cottonwood. Dr. W. F. Roberts, of Clinton, La., once saw a shower of it fall; some of it fell on him, and he discovered its character by its being sticky, which induced him to taste it. Dr. Roberts knows a man on whose cotton so much of it fell one year that he was seriously afraid it would interfere with its being ginned.

I once saw a great deal on the leaves of a wild plum tree. It was entirely different from this. It was crusted over the leaves dry or nearly so, and looked like the manna we see in the drug stores. I thought, and still think it must have been very similar to the "bread of Heaven" on which the children of Israel fed in the wilderness. The Bible says, "When the dew that lay was gone up, behold upon the face of the wilderness there lay a small round thing, as small as the hoar frost on the ground. It was like coriander seed, white; and the taste of it was like wafers made with honey. When the sun waxed hot it melted." At a certain temperature sugar melts, and I am not sure that it is not sometimes hot enough on the sand in the sunshine, even here to approach if not reach the melting point.

When dry, the honey-dew of this season looks like a varnish on the leaves, is in little spattered spots on most of them, though it covers the entire surface of the leaves on some trees and drips from the edges. The honey from it is dark and inferior. I have examined the leaves and the trees repeatedly, and in every case they seemed perfectly healthy. No one seeing it could think for an instant that aphides have had anything to do with it. When it first appeared the weather was misty now and then and the bees worked on it furiously at such times. My honey in the house was leaking and running out on the ground. When the sun was shining, the bees were busy trying to save it, but even a passing cloud would send them on swift wings to the honey-covered trees. It seemed that even a few cloudy moments enables them to appropriate it. I had no idea before that the quantity of moisture in the atmosphere could be so immediately affected by such a cause.

Two years ago, the whole spring my bees would scarcely wait for daybreak, they were busy, busy as only bees can be, from the first streak of daylight to the last gleam of twilight; the nectar flowing in an unceasing stream for weeks. Now during the continuance of this honey-dew we would suppose they would be doubly anxious to stir early as they cannot gather it "when the sun waxes hot." But to my surprise they wait till broad daylight or later before sallying forth. It may be that like some bigger folks, the more they have the more they want; and that wonderful flow kept their little heads as well as their honey sacs so full of honey that they could scarcely wait for the morning.

It is passing strange why honey-dew falls only on certhin trees. Though of different families, these trees must have some property in common which causes this strange phenomenon; most of them are of a bitter or a stringent nature. Nectar proper is not always secreted in a nectary, but sometimes on the petals, and is it any stranger if from the leaf should emanate a volatile species of nectar which after making an attempt to rise falls again? The perfume of flowers we are told is a kind of heat jacket intended to protect their tender germs. Leaves are the lungs of plants, as we all know, and I fancy that the breath, so as to speak, from these leaves meets under certain atmospheric conditions, elements in the atmosphere which changing its character comes back to the leaves in these little showers of sweetness.

LATER INVESTIGATIONS.

July 17, 1877.—I have just seen Dr. W. F. Roberts and questioned him again about the shower of honey-dew he saw fall. He says it was in the evening when the sun was about two hours high, that there were no trees near, and he is perfectly certain there was no chance for him to have been mistaken, indeed he says he saw it repeatedly in his boyhood. Dr. Roberts says the gentleman on whose cotton the honey-dew fell in such quantities is Mr. Dick Rowley, living near this place.

Dr. Roberts speaks of trying a brick hive, about a foot thick. Another gentleman near me has a quadruple hive, which he thinks just the thing; two men can lift the whole contrivance. I pointed to one of my mammoth stocks and asked him how he thought it would answer for Italians? He had to confess he did not think it would do so well.

My bees are still getting something from the honey-dew. They have not killed their drones but are still rearing more. One of my little nephews thinks honey-dew honey so mean that he can only be induced to eat it by being threatened with cod liver oil; one or the other he must take, so he submits to the necessity but with much grumbling.

An intelligent gentleman tells me that the leaves of those trees which were most profusely covered with honey-dew now look brown and scorched, as it were. None of the trees I noticed with much of it on them, are low enough for me to see well, or near enough for present examination; but the sweet-bay bushes (*Magnolia glauca*) near by are covered with it now and look badly, beyond description, very much as if they were mildewed.

Of course I don't like to take a stand in opposition to "all the world and the rest of mankind," unless very sure I am right. If you publish the article, attach this to it to show that I am not so opinionated as that might lead some to think me.

Woodville, Miss. Anna Saunders.

For the American Bee Journal.

Answer to Mr. Dadant.

Mr. Newman:—As you have published Mr. Dadant's article about me, in justice you should give me a hearing.

I would like to know why it concerns Mr. Dadant as to what I sell or buy, or my price for it? My dollar queens show better marks of purity than Mr. Dadant's imported queens. This I am willing to let any good judge decide; if they will not produce better bees for honey-gathering, I will give him ten colonies. Is he ready for the test? I procured some imported queens from the editor of *L'Apicoltore*, Milano, Italy.

I have 50 letters similar to the following:

"Columbus, Ind., Feb. 20, 1877.—Hardin Haines: I have an imported queen valued at $10, but I do not value her so high—say about 10 cents. The workers are as dark as common blacks. J. M. Brooks & Bro."

"Columbia, Tenn.—I have 2 of Dadant's imported queens that I have a poor opinion of. Wm. J. Andrews."

My imported queens that came from Upper Italy and Cyprus Island are very yellow. I sent D. Staples nearly all my papers concerning importation, and I think he is satisfied. The price was to be six queens.

Mr. Andrews did not offer me $50 for a Cyprian queen. I wouldn't sell mine for $75.

I made a mistake in writing Dadant. The queen I bought for an Egyptian proved to be a Cyprian. I can show my letters, draft receipts, etc., but will not to him, for he would like to get them from there also. I have seen Mr. Dadant's bees, and I have seen better hybrids. I sent him $14 for an imported colony (to infuse new life etc., in my apiary), and spent $15 more to go and see his apiary. He claims I ordered ten colonies, and now keeps my $14, but has not sent me a colony, and says he will give it to a charitable society and send me a receipt; but even this he has not done yet. I would not degrade myself for that amount. Hardin Haines.

[The above gives *both sides* of this unpleasant controversy, but it can proceed no further in our columns. We have omitted several offensive paragraphs in the above. Though we desire to be fair to all, we have no room for such controvercies, and less relish.—Ed.]

Our Letter Box.

Canajoharrie, N. Y., July 17, 1877.—"The weather is warm and quite rainy now. The honey season has been a very ordinary one here." J. H. NELLIS.

Kane Co., Ill., July 14, 1877.—"Bees are working with a will. Have taken 3 tons of honey to this date; we expect much more if the weather keeps good."

J. OATMAN & CO.

Hamilton, Ont., June 26, 1877.—"Bees are knee deep in honey—white clover at that. I have increased from 6 to 10 colonies, and have extracted 200 lbs. so far. I am Italianizing my apiary and about a dozen for my neighbors." J. A. WATERHOUSE.

St. Charles, Mo., July 2, 1877.—"Enclosed please find $1.60; please send me another Bingham standard smoker. Every bee-keeper in the country should have one of them. I sold the last one I got from you to a man who has only 1 stand of bees."

A. W. WINDHORST.

Napoleon, O., July 18, 1877.—"Bees are doing well thus far, this season; that is what few were left, and not killed by bad management. Most of the bees in Henry Co. were dead this spring. D. Kepler who had 234 stocks, had but 3 left; and others that followed his teaching fared no better."

G. W. ZIMMERMAN.

Hastings, Minn., July 4, 1877.—"Our bees are doing well, but June was a very poor month for bees, the nights were cold and wind heavy. We have an abundance of white clover, and basswood has now commenced to bloom; also sumac and milkweed. Last season I had over 4,200 lbs. of honey. I shall run for box honey this year." WM. DYER.

Shelbyville, Ky., July 10, 1877.—"The honey crop has been good. Thus far I have taken 3,000 lbs. of comb and extracted honey. I had 40 colonies this spring, some of them very weak. I have 26 in 2-story Langstroth hives. It is in my opinion the hive to use for much honey. The extractor, if well used, will prevent swarming. I now have 52 colonies in excellent condition. I expect to take more honey if the season continues favorable." FRED KRUEGER.

Modesto, Cal., June 26, 1877.—"The longer I use the Barnes' foot-power saw the better I like it. I would not take $100 in gold for it, if I could not get another. I can endorse what Mr. Dadant said about it in the June number of the JOURNAL. It is all-important that those who use this saw should know how to keep it in good cutting order. Everyone should have the 'Lumberman's Hand Book,' by H. Diston & Sons, price 15 cts., and a half-round file, price 20c.; and you will be astonished how much easier it is to keep the saws in order, and how much faster they cut, than by filing with a three-cornered file. Since I got the above I can saw ¼ faster and not wear the saw down ¼ as fast.

"The severe droughts here has cut off all honey supplies, and some of the bees have to be fed to keep them from starving. But we hope they will do better soon, as the button willow is about ready to bloom, and the season for honey-dew is at hand. Last year, about the middle of July, I moved my bees to the river. I live out on the plains, where they do best in spring. My 58 stocks produced over 2¼ tons of honey."

J. F. FLORY.

Cincinnati, O., July 13, 1877.—"Our honey season is now over. The quality is A 1; but we are short in quantity. My crop last year was about 4,000 lbs., from 22 colonies. This year I shall have perhaps 1,200 lbs. from 21 colonies. Our season commenced too late, on account of rains; and in the 2nd week of June, when we should have had the best flow of honey, the nights were cold—a severe check to the honey harvest.

"It may be of importance to some of our friends to know the correct recipe for cure for foul brood. It is: 128 gr. salicylic acid, 128 gr. soda borax, 16 oz. distilled water. Any druggist can put it up."

CHAS. F. MUTH.

Hartford, N. Y., July 6, 1877.—"Noticing the letter of friend Bingham in last number of the JOURNAL, induces me to give the result of my observations upon eggs in queen cells. I think I can tell every time when I see eggs in a queen cell, whether it has been laid there by the queen or deposited by the bees. When deposited by the bees it lays down flat in the bottom of the cell. If laid by the queen it stands nearly on end and in the well known position. Bees generally insert eggs in queen cells when deprived of their queen. We would now like to see or at least hear from some of those who last season pronounced comb foundation as the greatest humbug of the day. We have given it a thorough trial and the bees work it out in short time, and it is soon filled with brood. We think that instead of denouncing Novice as a blind guide in bee-culture, he should receive some merit of praise, on the foundation question at least. The season here has been unfavorable for box honey; had much cool weather and heavy rains. There is great abundance of white clover, and basswood will soon bloom in great profusion."

J. H. MARTIN.

Lawrence, Ill., July 9, 1877.—"Last Dec. I put 80 stocks of black bees in my cellar, placing them on shelves, one above the other four high. Last spring I sat them all out again, and in fine condition except two, and they are coming out all right. They commenced swarming on June 15, and since that time have had 130 swarms; but I have doubled so many and so many have doubled themselves, that I have only 80 new hives filled as yet. So you see that I have just doubled my bees, and there are more to follow. I believe in keeping my stocks strong, and in so doing I find there is no need of troubling myself about moths, as Italians. I have taken off about 100 lbs. of new honey (white clover) so far. I have stocks less than 10 days old that have stored 15 lbs. of honey in boxes.

"I have been interested to-day in reading the report of W. L. Porter to the Michigan Convention, and I am just of his opinion as regards Italian bees. There are some of them kept just over the fence from my blacks, and so far they have proved themselves inferior to mine in every respect. It is with them as with fancy stock generally. Give common stock the same care as is given to fancy stock, and there would be a great improvement in it. Give blacks the same care as Italians, and they will give just as good satisfaction. It is my opinion that when Italian queens are shut out of the mails, that Italian bees will be worth no more than blacks; for I notice that it is those who have queens for sale are the most prominent in lauding the Italians to the skies and kick the others under foot."

J. L. ANDERSON.

[Friend Anderson is rather rash in giving his opinion. There are many we know who never sold a bee in their lives that prefer Italians to blacks. But ALL have their opinions, and may freely express them, too, in the A. B. J.—ED.]

Van Buren Co., Mich., June 29, 1877.—"Bees are doing first rate here."

JOHN CROWFOOT.

San Louis Rey, Cal., June 18, 1877.—"We had some very hot, dry weather from the 8th to the 13th, during which the thermometer rose to 108°, 105°, 103°, etc., while the hygrometer was down to 65° to 70°—showing an unexampled dryness of the air. My bees took up 10 gallons of water every hour while the heat lasted."

G. F. MERRIAM.

South Haven, Mich., June 26, 1877.—"My Bingham smoker has given the most unbounded satisfaction. There is nothing in the market in the line of bee smokers that can at all compare with it."

H. A. BURCH.

Nelson, Pa., July 4, 1877.—"This is the best season for white clover for several years; frequent showers causing it to last longer than usual. My honey last year was all mixed, but I shall have quite a lot of pure clover honey this year, owing partly to the good season, and partly to about 100 sections of comb that I extracted at the end of last season. These were from unfinished boxes which were filled and some of them partially capped over before the bees built new comb in boxes. For this reason, if for no other, I prefer the sectional boxes for comb honey. So does neighbor Bolt.

"I have used frames of each of the following sizes: 11¼x19, 10x19, 10x12, and 13x13 in.; now I am transferring and putting natural swarms into a frame 12x12 outside, or 11¼x11¼ inside measure, and think I have got through changing frames. Mr. Bolt has been through all the above sizes, and is now using one 12x15, the longest way up and down. I use my 2-story hives with the extractor, or one-story with boxes, as occasion requires; and the 12x12 frame being a sort of medium between tall and shallow, or large and small frames, answers the best, all things considered.

"I have a smoker which I made by attaching a bellows to my old Quinby puff-ball fumigator, which is simpler in construction than any of the smokers advertised in the JOURNAL, as far as I can judge from the cuts, and I think it is as convenient and as durable as any of them. It is operated with one hand, the bellows worked with the thumb—just as one would use an oil-can in oiling machinery. I use dry, rotten wood in it, and can go to dinner leaving it standing on top of a hive, come back and find it ready for use." JOHN ATKINSON.

Jefferson Co., Tenn., July 20, 1877.—"We have had a good season here for honey—the first for several years. Last winter we lost about 60 per cent. of what few bees were left. I had only 7 weak colonies left; which I have increased, mostly by artificial swarming, to 19 strong ones, and have taken 450 lbs. of extracted, and about 60 lbs. of box honey, and have raised 15 extra queens. Honey-dew has been very plentiful this year, which is produced by an insect, or rather by various kinds of insects, which feed on the leaf of the oak and other trees. The sourwood honey harvest has been good here this year. Strong colonies storing from 16 to 40 lbs. from that alone. It is the finest honey that we have, is very thick and as clear as water. It commences to bloom about June 20th, and continues 5 weeks. I send you sample of the bloom and wish that I could send some of the honey by mail. I think it can't be beat by any other honey."

H.

[The sample is received. It is a fine honey-producer and no doubt gave excellent honey.—ED.]

Kennebec Co., Me., July 26, 1877.—"The honey season promised well at the commencement, in the last of May, but our bright skies were soon clouded. We have had a very dry summer, and the flowers produced but little honey, and that has been dark and thick, and of strong flavor. Bees have swarmed but a little or not at all, and unless we have a good fall honey-harvest, many colonies will not get enough to carry them through winter. I fear this dark-colored honey is not good for wintering on. Will those who have had experience in wintering bees on dark, strong honey please report for the JOURNAL? I have 20 swarms of bees and am in hopes to get them in good condition to winter. Fewer bees are kept in this State than in any other of the Union." ISAAC F. PLUMMER.

Montcalm Co., Mich., July 22, 1877.—"We have no basswood honey this season. There was an immense bloom, but a dry scorching sun and high wind destroyed it all. We have had three poor seasons now in succession. The fall flowers may help us some. I send you photograph of my home apiary. It contains 200 colonies. In the foreground is a field of alsike clover. I keep my farm seeded with it, and consider it the best honey plant. The small building to the left is a store-house for honey. A few rods distant I have a 5-horse power saw mill for cutting hives and frames. Just over the oldest boy's head is a mammoth swarm hanging on the apple tree."

HIRAM ROOP.

[Friend Roop will please accept our thanks for the photo. It will occupy a place in our museum, and be an interesting study to many of our visitors who know him only by name.—ED.]

Battle Ground, Ind., July 23, 1877.—"I now have 14 apiaries in successful operation, with over 1,500 stocks of bees, doing quite well in the Hicks' hive. I have had over 30 year's experience." J. M. HICKS.

Eagle Lake, Minn., July 20, 1877.—"My bees have done well. I have taken 1,500 lbs of honey from 60 colonies, and they still have enough honey to winter on. They are all Italians. I would not have any other bees at any price."
H. A. SIMONDS.

Carrollton, La., July 23, 1877.—"I am extracting from two of my apiaries. I expect to have 250 colonies by Sept., and pure young queens for each of them, besides wintering some for spring trade. I expect 10 pure queens soon to breed from. Our second rain since April 10th, came last Saturday. It has done considerable good."
W. B. RUSH.

Hastings, Minn., July 25, 1877.—"Our season for basswood honey is over. It has been extremely hot and dry. Bees have been doing very well so far this season. Our great honey harvest has yet to come. From the wild flowers on our bottoms along the river, which usually lasts from Aug. 1st till frost comes, I have had swarms gather over 100 lbs. often this time. One season 2 swarms on Aug. 28 and 29, filled their hives without any assistance, and threw out the first swarms the next season. I am extracting only to give the queen plenty of room."
WM. DYER.

Marshall Co., Ind., July 22, 1877.—"I lost 56 out of 86 colonies last winter. Three-fourths of all the bees in this part of the country died last winter—some lost all they had. Bees have not done well here since 1874; that was the year I started with 10 swarms of blacks in box hives. I had them transferred to the American hive, and they made so much honey that fall, I thought I could make a fortune with them. They have not more than paid expenses since. Still I think there is money in bees yet—in good seasons. I am a farmer and have not the time to attend to my bees as I should. You know how things pay half attended to. I have the Italian bee, which I think are better than blacks. Have one of Hill's gas-pipe extractors. I extracted about 50 gallons last year, but it won't sell well about here. They think it some composition that I make myself. I tell them I will give $20 if they find anything in it but pure honey."
JOHN W. OSBORN.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be tested.

Foreign Notes,

GLEANED BY FRANK BENTON.

THE "A. B. J." IN EUROPE.—Numerous translations from THE AMERICAN BEE JOURNAL are noticeable in the European journals of apiculture.

FOUL BROOD.—Herr A. Lorenz says in *Der Bienenvater:* "In localities supplied with rich harvests, the bee-keeper knows nothing of foul brood—a strong proof of my conclusion that its cause is to be sought only in a lack of pasturage."

JAVANESE BEES.—Sig. Giuseppe Fiorini, of Monselice, Italy, the proprietor of an apiary containing 500 colonies, has undertaken the importation of the large bee known as *apis dorsata*, a native of the island of Java, first described by Herr Edward Cori, of Bruex, Bohemia. *L'Apicoltore*, published in Milan, speaks very highly of Sig. Fiorini and his undertaking.

AT last apiculture is to be taught in the Normal schools. But, *o etouffeurs!* don't be alarmed, for it's beyond the seas, that is, in Canada, where this is to take place.—*L'Apiculteur, Paris.*

FARMERS AND BEE-KEEPERS.—In the course of his opening address before the 21st convention of German and Austrian bee-keepers, Dr. Settegast, the president, said: "He who causes two blades of grass to grow where but one grew before, may be regarded as a benefactor. And every bee-culturist is such a benefactor, and should be received with open arms by each farmer near whose property he locates."

FROM "NOSTRA BELLA ITALIA."—*L'Apicoltore* publishes the programme of the 10th apistic exhibition of the Central Association for the Encouragement of Apiculture in Italy, which is to be held at Milan Dec. 4–9 inclusive, 1877. Liberal premiums for displays of apiarian products and implements are offered. The Italians manifest great interest in the advancement of the real science of apiculture, and, judging from their journals, there must be some skillful apiarists among them.

DISTRIBUTION OF THE HONEY BEE.—Our native black bee extends as far north as the northern part of Sweden and Finnland; it is found in Sweden under the parallel of 64° N. latitude, and in Finnland under 60° to 61° N. latitude. In Siberia, bee-culture is carried on as far north as the parallel of 51°. Our bee is to be found on the African contiment in Algiers, Guinea, and at the Cape. It was taken to America and has spread itself over that continent with a rapidity bordering upon the wonderful, even flourishing splendidly in the tropics. The Italian bee was sent to America by Dr. Dzierzon, and to Australia in 1862 by the Englishman, Woodbury.—*Elsaessische Bienen-Zuechter.*

Notes and Queries.

RUST ON EXTRACTOR.

Sumpter Co., Ala., June 18, 1877.—"Will you please tell me through the JOURNAL how to keep the wires in my honey extractor from rusting?" SUBSCRIBER.

[If the extractor is left just as the honey leaves it, there is no danger of rust. The honey will never *rust* it; but if it is washed, the *water* will.—ED.]

TULIP AND BASSWOOD.

Nevada City, Cal., July 9, 1877.—"Please answer the following questions:

1. How old must a tulip tree be before it blossoms; and how high will it be at the same time?
2. How old, and what size are basswood trees when they blossom?
3. What soil and climate do both tulip and basswood grow best on?"

R. E. BUSH.

[We have tulip trees (*Liriodendron tulipifera*) now 15 years old, that bloom. They are about 20 ft. high.

Basswood will bloom at 8 or 10 years of age, and when not more than as many feet high. Both these trees thrive best in a moist climate. The first flourishes even on quite light sandy soil, while the basswood requires a rich sand or clay loam.—A. J. COOK.]

WHY DO THEY NOT SWARM?

Grand Meadow, Minn., July 2, 1877.—"Bees are doing well here now, those that managed to save them through the winter. In this neighborhood many lost all they had. I have 2 swarms that have already sent out 4 swarms each; all in good shape. Have another that was very strong in the spring, and is full of honey, bees and brood, but will not swarm; they have queen cells half built for weeks, but do not put eggs in them. I cut out all drone brood, as they are hybrids and I don't want to mix with my pure Italians. Is that the reason they do not swarm? They work splendidly, and rather than let them hang outside doing nothing I have added two supers, making a 4-story hive, and they are working to the top. Can you solve the question?"

C. F. GREENING.

[The reason why some bees refuse to swarm is obscure. I think cutting out or removing drone brood is not the correct answer. Giving them plenty of room may be the reason, though it will not always answer the question. Something may be done to individual peculiarities of bees, though I think there is some law governing the swarming impulse not yet revealed. Sometimes bees in full colonies with little room are slow to swarm; while again, bees with abundance of room seem bent on swarming. I feel sure that by early and persistent attention, swarming can be almost wholly controlled, but it requires much skill and experience. If the queen in question was pure, I should advise Mr. Greening to breed from her, and even now recommend that he let her work.—A. J. COOK.]

COMB FOUNDATION.

FRIEND NEWMAN:—I wish to ask you a question. Does the foundation remain thick or is it worked out by the bees—the wax in it being used to build the cells?

JOHN Z. CARR.

[That question we might answer with both "Yes" and "No." We have some foundation in this office, the cells of which were lengthened out by the bees, using the wax of the foundation for that purpose. It was only in the hive a few hours, and the samples are in the various stages of building. We also have on our desk a piece of foundation that we cut out of the centre of some excellent white clover honey, as it stood upon our breakfast table this morning. It appears just like other foundation, and is of similar thickness, but shows where the bees had attached the sides of the cells to it. It is evident, therefore, that the bees are not always governed by the same rule. Under some circumstances they use the foundation to attach the cells to; under others, they thin out the wax and make cells from it—when they are not so "busy," perhaps.—ED.]

QUINBY HIVE—FOUL BROOD—MOTHS.

Shelby Co., Mo., July 13, 1877.—"Will you please give a description of Quinby's non-patented, non-swarmer, and tell me where it is for sale?

2. What is meant by foul brood?
3. When does the moth-miller cease to lay? Should think that one overhauling of the hive after that would insure bees against its ravages for the winter."

E. C. PHILLIPS.

[The Quinby hive is for sale by L. C. Root, Mohawk, N.Y. It is the latest invention of the late M. Quinby. The frames stand on the bottom-board and are held upright without support at the upper corners. Top boxes are placed directly on the frames; 16 boxes being arranged on either side, 2 deep, and 4 abreast, with the ends directly against the main combs; no partition being between, except a narrow strip of glass that leaves an opening for the bees to pass immediately from the combs to the guide combs in the boxes.

2. Foul brood is a disease that depopulates the colony—the brood seems to putrefy, becomes black and gives an offensive

odor. For its treatment, see friend Muth's article on page 196 (June No.).

3. Moths may be seen every month from April till winter. If bees are kept strong there need be no fear of moths. Some syrup in vessels near the hives at night will be the means of destroying many.—ED.]

MELILOT CLOVER.

Star, Ind., July 20, 1877. — "Enclosed please find a plant which we call sweet clover; please answer through the JOURNAL whether it is melilot clover or not, as my bees do not seem to work upon it. Bumble bees work freely on it. The ground ivy is one of the best and earliest honey plants we have here. I find the garden radish one of the best for bees, by planting every 2 weeks." C. A. GING.

[The plant is the melilot or sweet clover—*Melilotus Alba*. I have found the bees on ours almost constantly, and the honey is just splendid. The bloom lasts a long time, and were this clover an annual instead of a biennial, I should rank it as one of the first. —A. J. COOK.]

HOW TO ITALIANIZE.

Lee Co., Ill., July 2, 1877.—"I have 60 colonies of hybrids. They are at work on clover. I wish to Italianize them. How shall I do it?" J. L. GREY.

[To Italianize a colony it is only necessary to procure and introduce a tested Italian queen. In order to do this find and destroy the old queen. Wind a strip of wire-cloth, 3½ inches wide, around your finger, in order to make a cage. The cloth should be about 15 meshes to the inch. Put a cork or plug of wood in one end, or pinch it together, and after putting in the queen plug the other end with a piece of comb honey or cork of some kind, and put the cage between two combs. After 48 hours, smoke the hive and cage thoroughly, opening the cage at one end. Watch the bees to see if they attack the queen. If so, again cage her for another 48 hours. It is a good plan to let some honey drop on the queen, when opening the cage; it will familiarize the bees with the queen, while they are cleansing her of the honey. From such a colony you can Italianize your whole apiary.—ED.]

BEST BEE PLANT AND CHEAPEST FEED.

Los Angeles, June 27, 1877.—"Please answer the following questions. Is there any bee-plant that would pay to plant in this climate where we do not have rain between March and Nov.? Which is the best to withstand drought?

What is the cheapest bee feed? The price of sugar here is 7 lbs. for $1, which is the cheapest kind. Is molasses good enough, as there are very few days in the year that bees cannot fly?

This is a most disastrous year for the bee-men of California, as we have had scarcely any rain. Bees in a great many localities are simply starving, and owners may consider themselves lucky if they save their bees alive without thinking of any income from them. My bees seem very industrious and work as hard as last year when they were bringing in immense quantities of honey. I have watched a strong hive that seemed to be doing its level best, and on examination found very little honey stored. What are they doing? I always thought when there is a scarcity of honey in the flowers, bees hang around the outside of hive with 'hands in pockets' and a most dejected expression on their faces." HAMILTON HURNARD.

[I am not able to speak authoritatively for California, but should suppose that rape, the mustards, and perhaps the mints, might stand the drough. I suppose our friend could easily test the question.

I should suppose extracted honey would be the cheapest bee feed in California. Such years as 1876, when honey was so abundant, a supply might be kept for time of need.

Bees in warm, sunny days are ever on the alert to gather, even though unable. This is why the apiarist should keep his bees in the cellar, in our cold climates, till flowers come. Else they wear out in their fruitless quests, and we are vexed with spring dwindling.—A. J. COOK.]

BUCKWHEAT FOR A LATE SECOND CROP.—Our friend Jesse Hobson wishes to remind our readers that a good crop of buckwheat can be grown on irrigated soil, sown as late as August. Indeed he prefers to sow it late, as it comes to maturity as the cold weather commences, and makes a better crop than early sown, which fills in hot weather and is apt to blight. Late sown gets the advantage of cool and damp weather, which is best adapted to its growth. Mr. H. says that he has grown heavy crops of buckwheat, as a second crop, on good soil, sown as late as the middle of August. It makes excellent bee pasturage, besides producing heavily of grain, and pays better than any other field crop, on an average.—*California Agriculturist and Artisan.*

☞ Subscribers will please notice the date upon their subscription labels and see that they are "up with the times."

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A positive cure. Painless and stainless. Price $1. Order from Dr. Quincy A. Scott, 278 Penn. Ave., Pittsburgh, Pa., or through any druggist. A liberal discount to dealers. Circular free.

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We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Remittances to be sent at our risk must be by Post-office Order, Registered Letter, Draft or Express (charges prepaid). Make Post-office Orders and Drafts payable to Thomas G. Newman & Son.

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and is a very valuable work.

Honey Markets.

NEW YORK.—In consequence of the advent of warm weather and small fruits the demand for honey for table purposes ceases here at this season of the year and the trade is confined to manufacturers, consequently prices are now at their lowest ebb. Just now there is considerable trade in West India honey for export. These transactions are with honey in bond, the duty being 20c. per gallon; dealers buy and sell it without taking taking it out of the custom house, except when our domestic honey sells so high as to justify the payment of import duties. At present the prices rule about as follows:

West India honey in bond, per gal., 82@85c, free, $1.02@1.05; white clover, strained, per ℔., 8@10c; buckwheat, 7@8c; white clover, comb, 14@15; buckwheat, comb, 10@12c. The price of honey of course will increase during the fall.

BEESWAX.

A few small parcels are being taken chiefly to ship. Sales at 30@31c., the latter price for choice southern.

Exports for week ending July 17	1,298 ℔s
" from Jan. 1st	61,233 "
" same time last year	38,269 "

Prompt sales can be relied on at the above quotations for the next 15 days.
H. K. & F. B. THURBER & Co.

CHICAGO. — Choice new comb honey, 15@18c. Extracted, choice white, 8@9c. Beeswax, 25@30.

CINCINNATI. — Quotations by C. F. Muth. Comb honey, in small boxes, 12½@15c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.75; per gross, $30.00. 2 ℔. jars, per doz., $5.00; per gross, $55.00.

SAN FRANCISCO. — Quotations by Stearns & Smith. White, in boxes and frames, 10@15c. Strained honey in good demand at 9@10c.; comb, 11@12½c.; beeswax, 25@26c. Extra fine grades of honey are firmer. Markets well supplied with low grades.

San Francisco, July 6, 1877.—"Our advice from all parts of the State is that we will have only about quarter of a crop. No new crop yet in the market. Old prices are 1@2 cts. finer." STEARNS & SMITH.

ITALIAN QUEENS!

I will furnish daughters of Select Imported Queens at the following prices:

Untested - $1.00
Tested - - 2.50

I have 100 colonies, and none but pure drones in my apiary. Address
JOHN ROOKER,
Strawtown,
Hamilton Co., Ind.

REDEEMED.
BY O. GERARD.

This is the title of the most successful temperance song published. It is now being sung nightly at the temperance meetings held in Cincinnati. Everybody should sing "Redeemed." Price 35 cents per copy. Can be played on the Piano or Organ. Address all orders to the publisher. F. W. HELMICK,
50 West 4th St., Cincinnati, O.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, SEPTEMBER, 1877. NO. 9.

Editor's Table.

☞ Don't *force* sales of honey now, and thus depress the market. A little delay will be very beneficial.

☞ See the new prices on foundation in this issue. As it has *proved* a success, the demand will be large and the prices correspondingly small.

☞ Friend M. Sorrick has sent us the Catalogue of the Iowa Industrial Exposition, which will open in Des Moines, Iowa, on Sept. 26th, and close Oct. 31, 1877.

"THE LOCUST PLAGUE" is the title of a new work on the Grasshopper or Rocky Mountain Locust, by Prof. C. V. Riley. It is nicely gotten up and illustrated. The matter is very interesting and exhaustive. The Professor gives some valuable hints as to its destruction.

THE CROPS in this country are simply enormous, but in Europe they are in gloomy contrast. In America the present crop has but seldom been equalled, in either quality or quantity. The crops of the north-west will this year bring two thousand millions of dollars into the hands of the producers. *Good enough ! !*

☞ Friend C. O. Perrine has gone to Europe in the interest of bees, honey, and—C. O. Perrine. He intends to visit England, France, Germany, and Italy. He says he shall try to determine the question of the existence of black bees in Italy, see whether bees work as well there as in this country, etc. He intends to buy some queens, and try the experiment of "importing on his own hook." When he returns our readers will learn the results of his investigations and experiments.

☞ Friend Baldwin of Lake County, Indiana, says that he and friend Keller always winters without loss by packing their hives some 3 inches all around with oak leaves.

☞ H. K. & F. B. Thurber, have purchased the entire honey crops of friends N. N. Betsinger and G. M. Doolittle, of New York. These crops are large, and we congratulate them on their early sale.

☞ Those who send honey to be exhibited in New York at the National Convention should see that it is nicely put up and properly labeled, stating the kind of honey and the bee-keeper's name and address.

☞ A copy of J. M. Hicks' "North American Bee-Keepers' Guide" is on our table. It contains much that is interesting to novices; and had the little work been nicely printed it would have been more acceptable generally. Of course it is intended chiefly to introduce Mr. Hick's hive.

DZIERZON THEORY.—Referring to the new issue of this excellent and valuable work, Novice remarks as follows:

"We congratulate friend Newman on having struck upon the bright idea of giving us the Dzierzon theory in a neat little pamphlet. This theory has been attacked from all sides for many years, yet like the Copernican theory of old, it stands as firm as the hills. Some of our young friends who are so hasty in deciding that the drone progeny is affected by the fertilization of the queen, had better give it a careful reading. It is a good thing for us all to read over carefully, even if we have once been over it in the first volume of the A. B. J. If there is anything you do not get hold of, in regard to queens, drones, and fertile workers, you had better read it. If thoroughly studied, it would save many a column of queries and long stories in all our bee papers."

Seasonable Hints.

Usually about the middle of September, all storing ceases in this latitude; then surplus boxes should be removed. If troubled with robbing bees, contract the entrances. If it is necessary to feed for winter, it should be done in the latter part of this month. If desired, colonies may be Italianized during the fall months. Care should be taken not to expose refuse honey, or it may cause trouble in the apiary. An examination should be made of every colony during this month, in order to ascertain its condition. Weak colonies should be strengthened by full frames from strong ones, or united. Any queen that is old or unprolific should now be superseded by a young and vigorous one, else she may die in midwinter and endanger the life of the colony in the spring. Be sure that all colonies have young bees and plenty of room for clustering near the centre of the hive, for it will not do to go into winter quarters with old bees only.

Fall honey is often gathered in abundance from golden-rod and other fall flowers during this month, and if the bees store more than is needed in the brood chamber, the extractor should be used, not to rob them, but to give the queen room to lay in—and thus produce the young bees so essential to safe wintering.

☞ After having thoroughly experimented with all shapes and sizes of frames, Novice says: "I recommend the Langstroth frame for everybody, and for every purpose, in preference to anything else.....I do not believe there is anything better." In this view the A. B. J. and Novice are in perfect accord.

☞ Friends: Look at the direction label on this paper. If the date on it is not "up with the times," you will greatly oblige us by sending us the lever to "boost it ahead." By urgent request we have waited on hundreds of our patrons till harvest; now the harvest is so plenty that they can easily fulfill their promises.

The National Convention.

Particulars of the arrangements made by friend Coe, for the session of the National Convention on Oct. 16th, may be found in this issue of THE JOURNAL. This is an important meeting and will we think result in much good to the bee-keeping fraternity. Honey producers and dealers will have an opportunity to confer on the all-important subject of how to place honey upon the market so as to make it the most profitable to bee keepers.

Messrs. Thurber offer a $50 gold medal for the finest sample of honey in the most marketable shape.

The Hon. and venerable Peter Cooper intends to offer a silver medal. He has already placed the magnificent Hall of the American Institute at our disposal, for the sessions of the Convention.

The finest and most interesting display of honey, beeswax, bees and apiarian supplies ever made ought to be on exhibition at the American Institute.

Let all subordinate associations send delegates, and provide for at least a part of the necessary expense. Where there is no association, let any bee-keeper elect himself a delegate, and *go*, in the interest of bee-keepers generally and of *himself* in particular.

The invitation is *broad* and general. —COME!

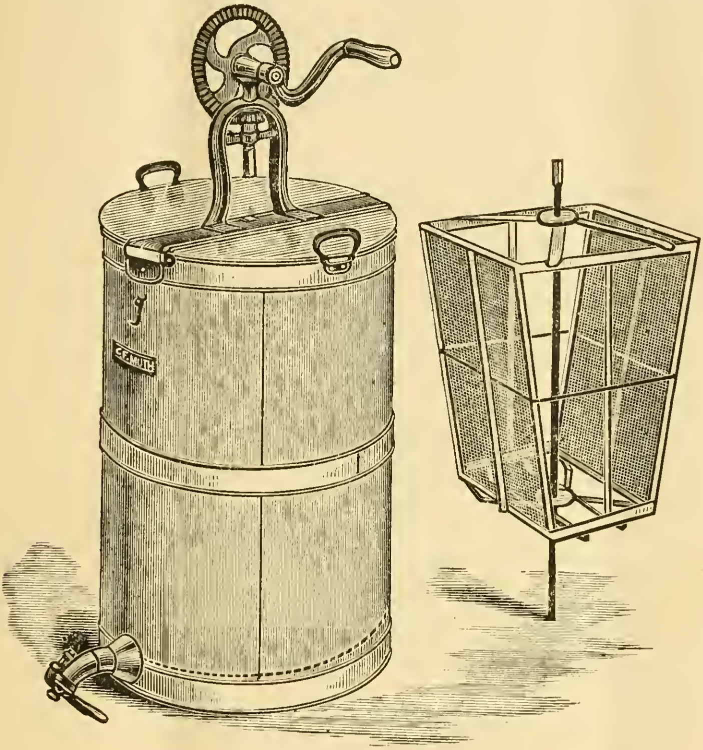
HON. PETER COOPER.—An Exchange remarks that the growth of the country is well shown by the fact that the man is still alive who, after middle age, built the first railway engine made on this continent. That man is our esteemed and philanthropic countryman, Peter Cooper. He built the engine after his own designs in Baltimore a little more than thirty years ago, and it was successfully operated on the Baltimore and Ohio Railway.

Mr. Cooper was the first to apply anthracite coal to the puddling of iron, which he did in a rolling and wire mill that he had erected in New York.

Mr. Cooper was 76 last February, and still feels a deep interest in the country and in all the people, particularly the laboring classes.

Muth's Extractor.

Friend Muth has just had a *new* cut of his extractor engraved, and as it more correctly represents his improved machine we give it to our readers. The cut speaks for itself and will be readily understood by all.



MUTH'S EXTRACTOR.

Surplus Frames.

In Thurber's Trade Circular, we notice the following, concerning surplus frames and honey boxes:

> The absolute failure of the honey crop in California is, beyond all peradventure, now an established fact, and prices, in consequence, have largely advanced, with a tendency towards still higher figures. The failure of the California crop affects the price of honey packed in glass to a still greater degree, owing to the fact that California honey is stored in what are called Harbison frames; these are racked together, packed in cases, and sold net weight, thus packers were able to cut out the combs and pack them into glass jars and tumblers, without loss of tares. This year we are obliged to fall back upon Eastern and Southern apiarists for our supplies. The custom among these bee-men is, to have their honey stored in 2 and 4½ ℔. caps or boxes, which they invariably sell gross weight. Now, a cap of honey weighing 4½ ℔s. gross weight, will tare 1¼ ℔s., and this the packer has to lose, a disadvantage which will be readily understood.
>
> It is a truth that our many friends will, no doubt, willingly attest that, our avowed and accomplished aim has always been the "best goods at the cheapest prices," and in pursuance of this principle, we took hold of the business of packing honey on a large scale, and by applying our usual business principles, succeeded in reducing the prices for honey packed in glass more than 40 per cent., but for the reasons above given, we are obliged this season, to advance prices materially, although not near to the old prices of 1874-5.
>
> Anticipating the advance in honey, we contracted early in the season for the crops of all the best apiarists stored in caps, not to exceed 2½ ℔s. each in weight, and to meet the requirements of the trade, will pack only 12 of these little caps in a crate. The caps are to be four sides glass, while the tops and bottoms and the entire crates are to be made out of the whitest New England pine, all second growth. The honey thus stored, will at once present the neatest and newest possible appearance, which, in connection with the fine quality of the goods, will tend greatly to increase their consumption.

◆

☞ Go to the National Convention.

The Honey Market.

The American *Grocer* says:

We are in possession of reliable information from San Diego, California, confirming the previous reports of the almost total failure of the honey crop in that and the counties lying contiguous thereto. Our readers will remember that last year was a wonderfully propitious one for the secretion of honey in that section—the rains were ample and the dews regular; the crop was unprecedentedly large. San Diego county alone shipped 1,277,155 lbs., and it is estimated that the yield in the entire State reached 2,500,000 lbs. This, or most of it, was forced upon our Eastern markets and prices became depressed; quotations for choice comb honey fell rapidly from 28c. to 18c. per lb., the most of it went into consumption at the latter price. This year the immense floral variety and phenominally splendid climate of that section seem to have availed nothing; a drouth set in, and worse yet, they have had no dews, and the whole face of the earth is parched into unproductiveness and death. What a metamorphosis! Mr. Harbison writes: "I have visited my apiaries the past week, and have heard from all the principal points. The inevitable result will be that a large portion of the bees will die of starvation unless fed enough to carry them through the period of six months. They are only gathering a living now, and can only depend on this lasting for, say 5 or 6 weeks, It follows that feeding will have to be resorted to from that time till flowers bloom, which will, at best be, till Feb., 1878."

The question now arises what effect the loss of California's crop will have upon the market? The opinion has been hazarded by an eminent apiarian that prices will be forced back to the old standard. This is a delusion that producers will, no doubt, delight to hug, but we question whether a calm investigation of the situation will justify such a hope.

The immense consumption of honey last fall and winter has satisfied capitalists that money can be profitably employed to develop our honey resources, even at the low prices that ruled them. Consumption always renders an article cheap and abundant; it renders possible the investment of vast capital in the establishment of large apiaries throughout the country, the reduction of transportation thereby making remote crops accessible and enabling bee men to work their apiaries at the minimum cost. It establishes the business upon a firmer basis and promotes this product to the dignity of a staple. All this could never be done unless the vast consumption of honey rendered it wise and practicable to do so. Here we see the advantage of the merchant; he induces consumption by pressing its sale, and it is the consumption of honey that increases its cheapness. It is only by extravagance, so to speak, by free and extensive use of honey, that the machinery by which it is made cheap is put into operation. If honey is consumed largely the resources will be co-extensively developed, and our immense wealth in this direction will startle us still further. If but little is used little will be produced; and that little dear. "Consumption and the possibilities of extended consumption," says that celebrated political economist, Mr. Bunce, "stimulate invention and industry."

Mr. Heddon, an apiarian of no inconsiderable practical experience, has for a long time attempted to dissuade men from embarking in the bee business, fearing the increased production would glut the market. He will find, however, that capital is not fixed in its activity nor human energies limited, and as Nature's resources are fairly boundless, honey will be extracted from the fields to an extent immensely determined by the demands of consumers. We all remember the old fable of Fortunatus, in whose purse a gold piece appeared as rapidly as the contents were withdrawn. In the new purse of Fortunatus, called production, two or more pieces appear as rapidly as one is withdrawn, and thus it is that in Texas, Louisiana, Florida, Alabama, and the South generally, which is now rapidly passing out of what may be called a "transition state," and activity taking the place of indolence, the modern purse of Fortunatus is found. Capital has found investment there, and this tier of States lying in the same latitude with California promises to send to market almost enough honey, produced in excess of last year, to offset the loss sustained by the failure of the crop in the latter State. More than this, the prospect in New York State for a large crop is very encouraging. One gentleman, in the central part of the State, recently informed us that he thought his yield would aggregate 100,000 to 150,000 lbs., against 70,000 lbs. last year. Favorable reports also reach us from Michigan, Wisconsin, and Ohio. Thus it will be seen that, notwithstanding the disastrous news from the Golden State, last year's consumption encouraged production in other quarters to such an extent that the increased supply thus secured will keep honey within reach of the poor, and we predict that prices will hardly be restored to the old standard, though California honey will, no doubt, be higher than last year.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

Our Visiting Jaunt.

We took advantage of the reduced rates, made in consequence of the Saengerfest or musical festival which took place at Louisiana, to visit some of our friends South. We spent a day and night attending the festival. At 4 P. M. on the 11th, we found the cars of the O. & M. R. R., and at 8 P. M. landed in Cincinnati. The following morning we called on friend

CHAS. F. MUTH,

spending the morning and driving with him. After dinner, he had his horse and buggy harnessed up and we soon found ourselves on the road to Mt. Healthy to pay a visit to our friend

J. S. HILL,

at whose residence we found ourselves in due time, and were soon among his bees. It is our opinion that Mr. Hill has one of the best, if not the best, apiaries in the United States. It is certainly far ahead of all others we ever visited, and we have visited quite a number. Everything is in apple-pie order. He has a place for everything and everything in its place. He uses the Langstroth hive, two-stories high, all were painted, and the tops covered with metal. He goes mostly for box or section-frame honey, but his crop this year, compared to that of last, was a failure. We spent but a short time at friend Hill's, but in that time we learned a great deal. We do not wish to crowd friend Hill with visitors, but would advise all amateurs who wish to learn the bee business thoroughly, if it be convenient, to pay friend Hill's apiary a visit. We know such will be made welcome. We took tea with friend Hill, after which we wended our way back to Cincinnati, under the shade of night.

We intended the next morning to go to Oxford and pay the

REV. L. L. LANGSTROTH

a visit, but Mr. Muth thought our trip would be in vain, as he did not think Mr. L. would be able to receive us if we went. So we gave the trip up. We wrote Mr. L. a note before leaving, and a day or two after we returned we received a postal card in reply from his daughter, stating that her father was too unwell to see me and expressing regret, etc.

FRIEND MUTH

insisted on our staying over another day, but seeing that he was very busy, and that we were causing him to neglect his business, but which he did without any reluctance, and was so very kind and liberal-hearted, that we could not get our mind's consent to remain and impose on his good nature any further. Our sincere hope is that it may be in our power some day to return the courtesies shown us by him.

A CORRECTION.

We wish to correct a statement made in the July number of the JOURNAL by Mr. Ch. Dadant. We did not offer Mr. Hardin Haines $50 for a Cyprian queen, but we wrote Mr. Dadant that we had written Mr. Hardin Haines that we thought his price—$15—was too low for Cyprian queens, and that we had made an offer of $50 for a genuine one. Mr. Haines replied to us that "he did not know they were so high priced."

I had also intended to take a part in the controversy in regard to "Dollar Queens," but failed to do so for want of time. In the main I agree with Mr. Ch. Dadant. I do not think it pays, and it has not been for the want of orders—on the contrary, up until we were prevented from sending by mail we received more orders than we could fill. Yet we think their sale has resulted in a great deal of good. Many have Italianized their bees who would not have done so if they had been compelled to pay more than $1 for queens. W J. A.

* * *

Weight of a Colony in June.

St. Mary's Parish, La., July 7, 1877.—Below please find an account of the gain and loss of a medium colony of black bees for the month of June, in this locality:

June 1,	½ ℔	11,	½ ℔	21,	1½
2,	¼	12,	½	22,	½ R.
3,	¼	13,	4	23,	1
4,	0	14,	1½	24,	1
5,	1	15,	1¼	25,	1
6,	0	16,	1¼	26,	1
7,	0	17,	2 Rain	27,	2
8,	⅔	18,	0 Rain	28,	1½
9,	⅔ Rain	19,	0	29,	2
10,	⅔	20,	1	30,	2

O, means that they gathered what they consumed daily. There was a loss only on one day (22d, ½ ℔). The last rain we had previous to June 1st was on May 20th.

Bees are now bringing in honey rapidly. My scale hive showed a gain of 5 lbs. yesterday. I have now 85 colonies in frame hives, and propose doubling them next year. They pay well in this section.

J. D. BEDELL.

Comb Honey—Honey House.

Hickman, Ky., Aug. 12, 1877.—"W. J. ANDREWS, Esq.: *Dear Sir*—As you are so kind to give information to Southern readers of our dear old A. B. J., I thought to ask you for some light about building a storehouse for honey. My means are very small. I have kept bees in a small way for pleasure and profit, for 4 years successively, but having lost my regular occupation as cabinetmaker, by fire, bees are now my sole support. I started this spring with 16, and have now 31 stands. I have up to this time extracted my honey every year; but was advised by Mr. Muth to raise comb honey in small frames, etc. My trouble is to keep it from insects, particularly the moth, though I never lost any bees by it. Will you give me some advice? I do not intend to keep more than about 60 stands. Which is cheapest, a frame building with weather-beading, etc., or one of brick, the same laid in the most economical way? Could the former be made perfectly moth proof? In answering the above questions you will oblige." GUSTAV ILISCH.

[We agree with friend Muth in his advice to you to raise comb honey. We have paid friend Muth several visits, and he has thoroughly convinced us that Southern bee-keepers must raise comb honey, in order to receive proper compensation. We think our poplar honey far superior in flavor to the white clover, yet our market is north of us, and they want either comb or very *light* honey. The latter I am quite certain we cannot get to compare with that gathered North.

We are not able to give you much advice in the construction of a honey house. A frame one we think would certainly be the cheapest. Ours is a frame building. Will not some of the readers of the JOURNAL, who have some experience with honey houses, give the information desired?—W. J. A.]

☞ We presented the Rev. M. Mahin, of Logansport, Ind., with a queen, and in a note to us he says: "I never saw purer Italian bees anywhere. I am delighted with them." This queen was presented for the best article in the *Bee World*. We will make a similar present for the best article written for this department of THE AMERICAN BEE JOURNAL, between this and the January number. The editor to make the decision. W. J. A.

Nixburg, Ala., July 24, 1877.—"W. J. ANDREWS: My bees have done remarkably well this season. Begun in the spring with 8 stands; increased by natural swarming to 17; have taken over 500 lbs. of the nicest box honey, leaving more than that in lower part of hive for winter stores and rearing of brood. If I only had an extractor I could have taken at least 1,500 lbs. I fear that they are so crowded with honey that they are not rearing brood enough. Without an extractor what is to be done in such cases? Please accept thanks for the queen; you are very, very kind." KATE GRAYSEN.

[In the absence of an extractor, remove some of your full frames of honey from the brood chamber, and replace them with empty frames, and compel them to build comb.—W. J. A.]

☞ Miss Anna Saunders writes us, on Aug. 12, 1877:

"The golden-rod commenced blooming on the 1st inst. Hope it will yield some honey this season. It is very abundant here...... If there is anything in my letters you think fit for the JOURNAL, you can make use of it. I will write especially for it when possible."

Thanks, Miss Anna, for the permission. We always find something useful in your letters, and shall gladly avail ourselves of your kind offer. W. J. A.

Foreign Notes,

GLEANED BY FRANK BENTON.

IT is astonishing how many periodicals and works treating on bee-culture have appeared within the last 5 years, in the Italian language.

IN France and Bavaria, the early part of the season was very unfavorable for bees. Cold winds and rains prevailed. The later months have partially repaired the loss. The yield of honey has not been great, but there have been many swarms.

RUSSIA.—Bee-culture is receiving much more attention than formerly in Northern Russia. Through the influence of an extensive real-estate owner in Wladimir-Wolynsk, the plan of forming a stock company for the culture of bees, has received such encouragement that it will, without doubt, be carried into effect.

A CENTENARIAN.—*L'Apiculteur* says: "Toward the close of June there was held at Nancy, the celebration of the centennial birthday anniversary of Mathieu Dombasle, one of our famous agriculturists. Certain apiculturists profitted by the occasion to press the hand of this patriarch of French observers."

AT the 31st exhibition and convention of the Society for the Elevation of Bee-Culture in Bohemia, held in Tetschen, Herr Edward Cori, Director of Chancellory, Bruex, was offered, on his Cyprian bees, the first premium consisting of a silver medal awarded by the State. The gentleman declined the medal, however, as he had previously received the same honor. It was then awarded to Herrn P. Franz Goerner, of Politz, for Cyprian bees. The first premium given by the Society, a silver medal, was awarded to Herrn Adolf Hauffe, of Tetschen; also for Cyprian bees.

ARISTOTLE called the queen bee *Basileus* (king); the Latins, *Rex* (king); and Shakespeare wrote: "They have a king."

THE tulip tree (*Liriodendron tulipifera*) commonly known in the Northern States as whitewood, and in the South as poplar, is being introduced in Germany. The *Frauendorfer Blaetter* says it flourishes in all localities, and also states that in the fall the leaves become wholly of a golden-yellow color, which, seen from afar, constitute a wonderfully beautiful sight."

HERR G. DATHE is the author of a work entitled: "Introduction to the Culture of Foreign Races of Bees, with Especial Reference to the Italian Bee." In his last edition, issued this year, he still gives the preference to the Italian race. His objection to the Cyprians is that they are not as docile as the Italians; but he does not adduce very good proof of the correctness of this view.

THE August number of *L'Apiculteur* (Paris) states that the work of preparation for the Exposition to be held next year is progressing, and that exhibitors in Class 83 (apiculture, silk culture, etc.) would receive during August, letters of admission, assigning them somewhat less space than was solicited. The arrangement of the semi-rustic pavilion designed to receive the entomological products, collections, and instruments, is said to be convenient, but the space allotted is small.

"SALICYLIC acid cures foul-brood, but besides being expensive and not always obtainable, it has the property of removing the aroma of the honey to which it is added, thus injuring the quality of the same. Carbonate of soda does not injure the honey with which it is mixed, and it is within the reach af all. An apiarist in Loiret, informs us that he cured his Italian bees of foul-brood by the use of wood ashes. He has promised to give us his method of applying them."—*L'Apiculteur.*

AFTER giving notice of an exhibition of flowers *Der Elsaessische Bienen-Zuechter* very sensibly remarks: "We cannot refrain from calling the especial attention of all Alsatian bee-culturists who are also florists, to the exhibition so closely related to apiculture. According to our most unprejudiced view, floriculture and apiculture should always go more hand-in-hand. At a florist's exhibition it is quite as proper that the various sorts of honey should find a place; as that at a bee-culturists' exhibition there should be a selection of beautiful plants and flowers."

A BRAZILIAN PLANT.—"One of the most important trees of Brazil is the Carnauba (*Copernicia cerifera*), a palm which grows wild in the provinces of Cera, Rio Grande del Norte, and others, and which, during the severest droughts, always remains green. All of its parts are useful—the roots, trunk, fibers, the edible pith, from which wine, vinegar, sugar, and a gum similar to sago, are obtained; the nuts, the dried bast from which huts, mats, brushes, and brooms are made; and, finally, the leaves, which furnish a wax used in the northern provinces in the making of candles, and which is largely exported."—*Bienenzeitung.*

WHEN a few hundred of those jolly German bee-keepers have finished one of their "big bee-talks," they have a great dinner, with music and toasting, and oftentimes close with an excursion or a musical entertainment. At the recent convention held in Tetschen, Bohemia, one of the toasts was: "Long live our beautiful Austria."

ADAM GRIMM.—"Bee-culture is not, after all, such a miserably small business. This has been proved by the late Adam Grimm, of Jefferson, Wis., U. S. A., who left behind him the handsome sum of $100,000—according to our money, about 210,000 florins—which he had accumulated solely and alone through bee-culture. In fag-end Europe one would run the risk of being shut up in an insane asylum if he should but let fall the idea of obtaining a fair living from bee-culture. Grimm took right hold of it though: he united German thoroughness with genuine Yankee energy; this is shown by the 1,400 stocks on hand at the time of his death. Entertaining the correct idea, namely: that bee-culture has for its aim only the production of honey and wax, he was, as are most of the American bee-keepers, almost wholly a honey-producer. Grimm was born at Holenbrunn, near Wunsiedel, once belonging to the so-called '*Sechsaemtern des Egerlandes.*' "—*Bienenvater, Prague, Bohemia.*

The Cyprian Bee.

FROM "DER BIENENVATER;" TRANSLATED BY FRANK BENTON.

As is well known, I have at various times bred in my apiary the best known races of bees. After I became aware that there were great difficulties in the way of keeping the races pure, and that the resulting confusion easily became great and costly, I believed that the preservation of the purity of the Italians as a very desirable race, was all that need be wished for; after I had convinced myself, also, that the Krainer bees were not a whit better than our native heath bees; and after I could confirm the expressed opinions concerning the Egyptians, I felt not the least inclination to procure and cultivate still another race, though the favorable of Chancellor-Director Cori, of Bruex, relative to the Cyprian bee, as also the epistolary communications of friend Hilbert, might well have induced me to do so. Meanwhile, Herr Cori's articles appeared in the American bee papers, the result of which was that an American bee-keeper addressed a letter to me requesting me to procure for him one or more pure Cyprian queens; and, if necessary, he was even inclined to bear the expense of a journey to the Island of Cyprus, for the sake of coming into possession of some pure Cyprian queens. Since, for my part, a journey to Cyprus for the importation of the Cyprian bee was not to be thought of, and as the worthy American must have placed a very high estimate on pure Cyprian bees, I resolved to apply directly to Herr Cori, of Bruex.

In answer to my inquiry I received word that in May of the following year, I could obtain the wished-for queens. When, however, May arrived the case was somewhat different. Upon inquiry about this time I was informed that I could procure of Count Kolowrat, at the castle of Kroby, in Bohemia, two pure Cyprian queens as a present, if I did not fear to take them from his stock which was somewhat affected with foulbrood.

It was a ticklish thing for me. What if, in this undertaking, I should import this terrible disease, which, up to this time, I only knew through hearsay.

However, I concluded to risk the matter, because I had great confidence in the working of salicylic acid, concerning which as a remedy for foul brood, I had already corresponded with Hilbert. Therefore the two Cyprian queens arrived shortly—and, indeed, in the finest possible condition. Their majesties were enclosed, together with numerous companions, in two little caskets, such as Hilbert has constructed for transportation. Very few dead bees were to be seen at the opening of the box. During the journey the bees in both boxes had built comb, and the queens had started brood, so that many eggs and larvæ were to be found in the comb.

Both nuclei I placed upon a distant stand and then allowed them to fly. After some days I removed the queens and inrroduced them according to my well-known and sure way to two very populous colonies. Then I prepared also two small nuclei for queen-rearing, and placed in each brood, bees and honey from the caskets.

These nuclei immediately formed queen cells, which I used later. The stocks to which the queens had been introduced, as well as the nuclei, were treated, according to Hilbert's method, with salicylic acid, and not a trace of foul-brood has shown itself till then. I could now venture to send one of the old pure queens to America, keeping meanwhile the other, which I could not well part with. Owing to the small number of pure drones I only succeeded in rearing two purely-fertilized queens.

The colony with the imported queen was especially diligent, gave a large return, and with the remainder of the stocks, was in good condition for winter. The wintering and development during the next spring left nothing more to be wished for.

After having carefully observed the Cyprian bee—pure as well as hybrid—I have come to the following conclusions regarding the same:

1. The diligence or the Cyprians is at least equal to that of the Italians; indeed, as regards economy within the hive the former have the preference, because they are less inclined to build drone comb. The same peculiarity is noticable also with the hybrids.

2. In their purity they are certainly more beautiful than the handsomest Italians. Those who visited my apiary were always much surprised as strong stocks filled with these beautiful bees were opened and masses of the insects rolled out so peaceably.

3. When rightly handled, they are not more or not less inclined to sting than the Italians.

Without doubt, Count Kolowrat, as well as Herr Cori, are deserving of great credit for importing this race of bees.

C. J. H. GRAVENHORST.

Braunschweig, Germany.

Our Letter Box.

Lansing, Mich., Aug. 6, 1877.—"The Bingham smoker is the best I have tried. Comb foundation is a grand success."

A. J. COOK.

Canajoharrie, N. Y., Aug. 4, 1877.—"With us the weather is wet and cool. Queen rearing tedious and uncertain and honey crop very ordinary." J. H. NELLIS.

Grand Meadow, Minn., Aug. 7, 1877.—"Bees are doing heavy business. Three of my swarms have already multiplied to 19. One of my *first* swarms having sent out two more, and the first of these will swarm again yet. They are rolling in honey."

C. F. GREENING.

Franklin Co., N. Y., Aug. 6, 1877.—"We have not much honey here this season, and no white clover. The first part of the season was very dry. And now 'hoppers are threatening the buckwheat."

CLEMENT MCDERMOT.

Moore's Hill, Ind., Aug. 5, 1877.—"Bees are not doing as well as last year. I wintered 30 colonies without loss in a frost-proof house; sold 14 this spring, leaving 16 not very strong colonies. I have taken 45 lbs. on an average from each hive—one-half each comb and extracted honey. My bees are all Italians." J. W. JOHNSON.

Crawford Co., Mo., July 28, 1877.—"I now have 25 colonies in a bee house; have taken 100 lbs. of comb honey in frames from two-story hives. I think we have a good location for bees and honey. In Feb. the wych hazel blooms for pollen, and we have abundance of bee feed, such as blood-root, bluebells, maples, elms, willows, whortleberries, apples, locusts, cherries, clovers, mints, sumac, linn, basswood, golden-rods, asters, etc." JOB HARMON, Sr.

Green Bush, Wis., Aug. 4, 1877.—"I feel disposed to enter my protest against the mode of introducing queens as recommended in the July number, page 235. I followed it as closely as possible, and now the result is I have lost at least 50 per cent. of my queens, besides setting robbers to work furiously. I am not yet certain but that I have lost 6 choice queens—5 very fine ones received from H. Alley, of Wenham, Mass., and one from A.H. Hart, of Appleton, Wis. I have one now caged and placed in comb,as recommended in the Aug. number. I await its result." JONATHAN STODDARD.

Mentor, O., Aug. 8, 1877.—"The honey season has been very poor here, but little surplus and no new swarms, except in a few instances, and they have no honey, and the old ones are rapidly eating up what they have. White clover was abundant,but the nights were cold and the days very windy, and the bees only made about 15 days' work on it, and light days at that. Basswood blossomed full, but only yielded honey 4 days, although the blossoms lasted 2 weeks. Fall forage will be scarce unless it rains soon, and heavily; everything is drying up." E. M. JOHNSON.

Modesto, Cal., July 28, 1877.—"The Bingham smokers came all right. I like them far better than I do the Quinby."
J. F. Flory.

Verona, N. Y., Aug. 6, 1877.—"Bees came through the spring all right, but did just nothing on apple blossom. Our honey crop will be rather light." R. Bacon.

[We learn with much regret that friend Bacon has met with an accident which has laid him up on a bed of pain—his leg being broken. With his active mind and natural energy this forced inactivity must be very irksome, and we trust it will be only of short duration.—Ed.]

Barren Co., Ky., Aug. 12, 1877.—"As I am interested in bee-culture and need all the information I can get on the subject, I shall take pleasure in putting up your posters, and in getting the "Dzierzon Theory," as you offer. My bees have not done very well this season. I think it has been too wet and cool for them; they have made an average of 23 lbs. to the hive, and increased in number 100 per cent. I am a regular reader of the Journal, and will just say:

Next to the Book,
Of life eternal;
Is A. J. Cook,
And the A. B. Journal."

N. H. Holman.

Tama Co., Iowa, Aug. 6, 1877.—"Bees are doing well this season. White clover is in abundance. I hope to take 1,000 lbs. of honey this year. I had 35 colonies this spring. I now have 83 stands, having sold 8; they furnished hives to put them in, making in all 91 colonies. I use the Langstroth hive. My colonies are all very heavy. Every one has honey enough to winter on. I can sell my honey here readily for 25 cts. per lb. My bees are mixed Italians and blacks; I would be glad to Italianize more. I have some new swarms that have stored from 20 to 50 lbs. in boxes. I have one colony that has swarmed five times this season; and the first swarm that came out swarmed once, making 6 from the original one. The old hive has a 5-lb box of honey, to date; the first swarm has 30 lbs., and the second, 10 lbs. As buckwheat is just coming on, what they may yet do I cannot tell."
M. A. Newcomb.

Brown Co., Wis., Aug. 20, 1877.—"I cured foul-brood in three of my hives by simply using soda and borax; one teaspoonful of each in two cups of warm water, dissolved well and applied as usual. I used one of those small steam atomizers, which doctors use for throat disease. It saved a great deal of time, and was more convenient, for I could set the atomizer on a box, and have both hands to hold the frames with; and it could be thoroughly sprayed in a minute or two." Mrs. J. S. Dunham.

Tipton Co., Tenn., Aug. 20, 1877.—"Bees did very well until the last week in May, when the heavy rains set in, which continued until the present month. During the first weeks of May my bees gathered as much as 1¼ lbs. of honey per colony in a day. Since then I can't see that they have gathered any." D. E. Haynie.

Portland, Me., Aug. 23, 1877.—"I had from one of Mr. Dadant's imported queens two very strong, artificial swarms, besides about 30 lbs. of box honey, being surrounded with fog half of the season."
Jos. A. Dirwanger.

Monroe, Wis., Aug. 25, 1877.—"Enclosed you will find 75c. for another pound of yellow comb foundation. I was very much pleased with what I did order, my bees went right to work in earnest—cells all full of eggs." Wallace E. Connett.

Garden Plain, Ill., Aug. 27, 1877.—"Bees are doing well now again, The season has been on the whole too dry for a good yield. What is the prospect this fall for the honey market?" R. R. Murphy.

[If the market is not *forced* we have no doubt but that it will rise later in the fall. Prices now rule from 15c. to 17c. for *new* comb honey, and from 7c. to 9c. for extracted.—Ed.]

Poolsville, Ind., Aug. 20, 1877.—"The materials that give me the best volume of smoke and the least trouble, are cotton rags and coarse hard-wood sawdust. Roll the sawdust in the rags. I use the Bingham smoker." J. A. Johnson.

Houston, Minn., Aug. 27, 1877.—"Mr. T. G. Newman: The first part of the season here in Minnesota bid fair for a good honey crop, and in July our bees put in some surplus from linden and clover, but since Aug. 1st it has been very dry and hot, so very little honey has been secured. We had a fine shower last night, and if we have plenty of wet we may get some surplus honey yet. In all probabilities, Minnesota will not be able to supply her demand, if prices remain where they are.

"Can you refer me to some one, south of here, in the Mississippi Valley that is raising honey, and can supply me with a stock for retailing this fall and winter."
Nelson Perkins.

[Will some one in the locality named write Mr. Perkins, giving him facts and figures?—Ed.]

Wyoming, N. Y., Aug. 16, 1877.—"Our honey season has been a short one this year. I have taken 1,400 lbs. of comb honey from 30 colonies. No buckwheat yet."
Geo. W. Stanley.

Brown Co., Wis., Aug. 27, 1877.—"Mr. Newman: Thanks for your kindness in sending me what I wanted. I am pleased with everything. Bingham's smoker is exactly what it is said to be, and reduces the labor wonderfully in working with bees, though I have but 25 hives. The foundation is the first I ever tried, and works wonderfully well. I received it by mail at one o'clock this afternoon, and inserted it in the hive between 3 and 4 p. m., and when I looked at it next morning at 9, it was built out ¾ inch in thickness; and so thin was the base of the cell that you could see through it. The Chapman extractor has arrived and works finely. I only regret not having ordered it earlier in the season."
Mrs. J. S. Dunham.

Shelbyville, Ky., Aug. 22, 1877.—"Bees have done first-rate. I have taken 300 ℔s. from 6 stocks, and increased to 13. My Italians are far superior to the spiteful blacks." GEO. T. HORNING.

Prairie du Sac, Aug. 23, 1877.—"I have 12 colonies of black bees, but have no extractor. I intend to get one in the spring, and also to try the foundation in surplus boxes." H. G. KING.

Youngsville, Pa., Aug. 18, 1877.—"FRIEND NEWMAN: My 170 colonies of Italians are wading into the buckwheat with a zeal that does one good to see. No black bees for me. I tried them 20 years, and know whereof I speak, Mr. Potter or any other man to the contrary, notwithstanding." W. J. DAVIS.

Madison, Ark., Aug. 24, 1877.—"The queens I received from Mr. Henderson are as beautiful as any I ever saw direct from Italy; they produce fine workers; for beauty and purity they are excelled by none. The untested queen that he sent me produces very fine workers. We have one of the finest bee locations in the U. S. Our honey season commences in March, with the bud bloom, which is excellent for pollen; then come the fruit trees, and in April and May the poplar, which grow in abundance, and the rosin-weed. These are instrumental in causing swarming in May. We are troubled very little here with moths, in fact none where colonies are kept strong. We have basswood or linn, tulip, gum, cypress, and catnip, in abundance, and a kind of swamp mustard that is a rich honey plant; then the smartweed and various other blooms equally as good. In fact, bees have good pasturage here from March 15th to last of Sept., and sometimes until Christmas. I have seen cotton bloom on Jan. 1st, and on Christmas day, 1875, the peach trees were in bloom. Bees give an average of 50 ℔s. of surplus per hive every year here. This has been rather a poor honey season on account of rain.

"I use a hive of Chas. Reade's construction. I prefer it to any that I ever saw. The brood chamber contains 9 frames, 12 in. square. It is so constructed as to use supers if desired; the cap contains 9 frames 12x7, and if desired, can, by removing the sides, be made double this size; we do so when Italianizing. There is not much danger in getting the queens purely mated. There are several bee-keepers here, but they know little and take less interest in their bees, they keep them for home consumption. The old log gum is used mostly here. We have a home market for our honey here, extracted at 15c., and comb at 20c. per ℔.

"I wish to know what is best to feed bees to make them produce comb." JOEL L. RICHARDSON.

[Feed them good honey; wax is the *fat* produced by feeding nutritious food. It takes from 15 to 25 ℔s. of honey to produce one pound of wax. Wax exudes from the folds of the abdomen of workers; thin flakes or scales form and are removed by the bees, and used for constructing comb. Good, rich food is therefore essential.—ED.]

Kenton, Tenn., Aug. 24th, 1877.—"Had a fine swarm of Italian bees to come out yesterday; they are doing well." J. W. HOWELL.

Benton City, Mo., July 23, 1877.—"Our bees are getting along very well, so far as brood is concerned, but are not gathering much honey. The spring was so wet that we lost all peach and apple bloom. White clover did but little good. Had some willow, but no honey-dew. Our harvest has been a poor one up to the present time, but we have now a very fine prospect for fall harvest, and I am trying to have my bees in condition to take their share of it. I am Italianizing, and find it very difficult to introduce a virgin queen; my bees kill them as fast as I put them in. I lost 16. Why is this? I use all the precaution at my command.

"I sent to Dr. Brown, of Augusta, Ga., for a nuclei with imported queen, but owing to a delay in the express, they were in bad condition. The queen did not lay for two weeks, although I built them up strong. Now she is a very fine layer, only she avoids drone laying. Until recently, I could not get any drone eggs—the very thing I wanted. I had suppressed all black drones. She is a very fine queen and I am well pleased with her. I put two sheets of Italian drone eggs in the top story of a black hive, the bees removed every drone egg, leaving worker eggs.

"Why are some Italian workers gray romped, and some black-steak romped—all from the same mother, and all showing the 3 yellow bands? Why is not a queen reared in nuclei as large and good as when reared in a full colony? Why are they differently marked?

"Why does a drone rub its head and eyes before leaving the hive? Why are they differently marked—all from the same mother?

"I use a queen nursery, after the plan of Nellis." P. P. COLLIER.

[A queen cell or young queen just emerging from a cell is usually received with favor after the old queen is removed and all other queen cells destroyed. It would be well to sprinkle with sweetened water or smoke them well, and try again.

The bees removed the drone eggs no doubt because *they* did not desire to have drones, though *you* wanted them.

Some impurity in the stock will account for the varying in color, etc.

Drones doubtless rub their head and eyes before leaving the hive for the purpose of being the better able to perceive a queen on her bridal trip. The head of a drone being nearly all eyes for that especial purpose.—ED.]

Dundee, Ill., Aug. 14, 1877.—"I have increased my 6 colonies of bees to 20, which are all quite strong but 2. One of these had a very curious-acting queen; she did not commence laying until long after the others, and then the eggs were very few in the combs. The bees have now killed her and are building queen cells." F. PERRY.

Correspondence.

For the American Bee Journal.

Comb Foundation.

Mr. Editor:—Now I have brood in all stages in combs made on foundation. Mr. Root has said that any foundation that stretched was impure. I put mine in a frame 4½ in. deep by 22 in. long, attached at the top, with ½ in. space at ends and 1 in. at bottom. It stretched up and down till the cells looked oval, in only this shallow depth. I sent my wax to Mr. Nellis to be made up, and he assures me this foundation is from my wax. I believe him. I put the sheets in 21x3½ in., and as straight as a board, but when the heat of the hive struck them they not only sagged, but warped or kinked. No doubt bee-keepers can devise ways and means (as perhaps many have already) to make the foundation hang true; and no doubt bees will work them out, but whether they will be found of profit as a wax economist, is yet to be tested by years of its use.

Mr. Editor, you can set me down as an

ITALIAN BEE MAN.

I am as ready to speak their praises, as I have been to tell their faults. I now have what I call my fifth distinct strain of Italian blood. This strain differs distinctly from the other four, in this way: the queens are smaller, longer proportionately, darker—leather colored,—and the workers the same, besides they are much more docile, and better workers than any Italians or blacks I have seen before. They go into the little boxes just as readily as black bees. One peculiar point is, that hybrids from this strain and blacks are just as peaceable as pure Italians. These bees are much handsomer than any others I have had, for "handsome is, that handsome does." I keep bees for the honey they produce, to spare. I keep them for profit. I do not wish to sell honey at prices that will make me rich and deprive the people of enjoying the luxury. On the other hand I do not mean to get excited over some new (to me) development and come to the conclusion that I can sell 1-℔ tumblers for 15c. with 10 per cent. off, and take my pay in groceries at that.

By the way, let me say a few words about

THE HONEY MARKET.

California is crippled nigh into death, it seems. Will not this lesson teach all of us to sympathise with each other and look out for breakers awaiting ourselves. As I wrote you in a previous article, Cass county has had her bees starve by hundreds of colonies all summer long. As is well known, I have done little to excite production of honey, and much to create demand, for one who only produces and sells his own crop. Bee-keepers, have I worked for or against your interest? Why should it be the duty of every bee-keeper to help outsiders into this business, while he goes about trying to crowd his honey into an already-glutted market, at the same time "looking daggers" at his neighbors' honey just in ahead of him; and even go so far as to intimate adulteration on the part of his neighbor and friend.

Two milk peddlers here are "running" each other. They are delivering milk, at a convenient hour to us, at 3c. per quart; all to spite each other, not to help us any. We sit back and drink milk and sing: "Here's two fat geese my cunning brothers, you pluck one and we'll pluck t'other." Of course one of these men is sadly to blame. Don't let any of us represent that man. We don't want to "put up jobs" nor combine and "corner" the market, if we could, but we want a fair competition and no spite work. Don't come to the conclusion, after a few years of honey-raising, that you can produce honey at 1c. per lb. Remember that it is small draughts that intoxicate the brain, and that you will ere long have to swallow something that will sober it again.

I think Mr. Root did wrong in advising honey-producers to sell their honey early. In many places in this State that advice has been hastily followed, and every time the result has been over-stocking and a sudden decline in prices. I am not going to offer a pound of honey at present. I believe the late market will be the best. I see nothing to prevent it, unless a grand early panic to get rid of the "drug" demoralizes it.

In my opinion every man who has put a pound of extracted honey on the market that was not all capped over and thoroughly ripened before it was extracted, has done himself and honey-producers generally a great wrong. In one minute you may prejudice a customer against your wares so much that it will take you years to undo the mischief. I look upon my stock of extracted honey about as I do a bank check. Why? Because it is honey in every sense of the word, and not nectar. It was capped before extracted.

OUR HONEY CROP.

Mr. Editor, you have printed my whistle, but I "whistled before I was out of the woods." Our basswood crop was only a partial one, as it cut right off on July 16th, giving us but 13 days of yield, only 10 of which was good. Can you tell us why we are going to get no more honey from 240 colonies than we have before realized, in no better seasons, from 50 to 75 colonies? We have worked the bees as closely as of old. A bee-keeper of 40 years' experience, a sharp and close observer, says he has ever noticed that the fewer bees kept in a locality the better they did, down to 4 stocks. He says that I am entirely over-stocked at my home apiary of 140 colonies. I think so too, writers to the contrary not withstanding.

SLATE REGISTERS.

Your slate registers strike me as among the few supplies that pay the money back.

FIXING A PRICE FOR HONEY.

Cannot the bee-keepers of this country establish a minimum price for honey, somewhere about the cost of production, and let those who are favorably situated get all they can and think best to take, while this fixed price will serve as a guide to a large number of producers who do not seem to know anything about what honey does cost. I find that consumers pay whatever is asked, and why can't we have something to say about price, as well as honey dealers? Our business is an uncertain one, and it seems to me we should be laying something aside for a "rainy day," or as California bee-keepers would say a "dry day" or so. A bee-keeper works harder than a farmer, and will wear out quicker. The "enthusiasm" that Prof. Cook says characterizes them, proves how hard they work with the mind as well as body. Reverses are as necessary to our welfare as success.

JAMES HEDDON.

Dowagiac, Mich., Aug. 4, 1877.

For the American Bee Journal.

Read This.

As some of your readers are having rather hard luck with the Italian bee, I send the following story for their especial benefit. Mr. S. G. Rose, of Bluff City, Ill., purchased a queen of me in 1876, and here are his own words as to how she has done. In ordering more queens on Aug. 1st, he wrote me thus: "I have six fine swarms from the hive I put that queen in, 54 lbs. of extracted and 30 lbs. cap honey up to July 25th. Who can beat this? Blacks did nothing."

That is the biggest bee story that I ever heard off this side of California. Now this is a very good report from one of those "yaller" drone-laying queens. Who can beat it? That was one of those $1 queens, and I don't think she would have done much better had I received $10 for her. As I have said before, it is not the price of the queen, but the quality. I am aware that all queens, no matter what the price is, do not come up to the one above spoken of. Then again, it is not always the fault with the queen or hive if a stock don't do well, but a combination of faults.

H. ALLEY.

Wenham, Mass.

For the American Bee Journal.

Larvæ of Queens and Purity of Drones.

Bees described by Virgil and Aristotle were a myth. Italian bees were first discovered by Latoure and Vinteghriea. Baldestein first imported a queen from Milano to Bern, Switzerland, in 1842. In 1851 they were introduced into Germany. In 1859 they were brought from Sicily to New York by Mahan, Parsons, and others. In the Island of Madagascar and Cypria there is found a species of bee called, as near as I can tell, *Aphis unicolor*, having five bands, with dints at side, and of a golden color.

The Cyprian bee was never into America till 1876. The honey produced by them is of a red color, but becomes dark by getting old.

Great numbers of bees are kept in Cyprus Island and Candia. The natives hollow out trees for them, laying them down lengthwise, or tieing them up in trees to keep the bears from eating the honey.

How do you tell the purity of the Italian drone? From what I have seen, I think drones that are three-banded are not pure; but if reared from a queen of pure race, whose progeny are all exactly alike, be she light or dark in color, the drones are pure; even if she meets a black drone, and her progeny become hybrids, her drones are pure.

A pure drone is one that has only one band and two others with dark spots, and spots on the sides. I have tried putting them in alcohol, then you can see them plainly.

When combs that contain eggs or larvæ are given to nuclei hives to rear queens, why do bees eat larvæ or eggs? The royal cell or queen eggs laid in royal cells are fed the larvæ of workers or eggs. Why is this? Eggs or larvæ are an ingrediment of royal jelly. Suppose we give a card of comb containing eggs to rear queens from, to a colony of black bees—will that queen be pure? We say no. The black bees impart a taint to the young queen, and the queens are not pure, but ⅞ths stock.

Vermont, Ill. HARDIN HAINES.

For the American Bee Journal.

Experience with Comb Foundation.

Most of us have such a mental make-up, that however strong may be the testimony given by others as to a fact, we do not believe it quite so fully from their testimony as we do after seeing it for ourselves. Nearly all the reports spoke favorably of the comb foundation, but I wanted to have the evidence of my own eyes, so I sent for a few pounds to test. It came by express in good condition. It was a good, thick, yellow article, and, from appearance and odor, seemed to be made of pure beeswax.

On the day the package came the bees were gathering rapidly from white clover. I filled a frame with foundation and put it in the midst of a strong colony at about 5 P. M. After breakfast the next morning I examined it, and found it all nicely started into comb, the cells over the whole surface of the sheet being built out nearly half their length. Just before 10 o'clock that night—being 24 hours after the foundation was put in—I found the comb still further completed, and had the luck to find the queen on the comb, apparently inspecting it, for she walked deliberately over it, and seemed to be examining it. I did not observe that she had then put any eggs into the cells. But the next morning—36 hours after the foundation was put in—there were plenty of eggs.

Being my first experiment with foundation, I took particular pleasure in watching that frame of comb. It filled the frame, except the usual space at the lower part of the sides and at the bottom. Of course, all were worker cells. The queen soon had it filled with eggs away out into the corners. In due time the brood was capped, and hatched, and now it is again filled.

Since then I have had quite a number of frames of foundation built out just as quickly, and as freely occupied by the queen. The comb so built seems to be thicker and stronger than that built in the usual way by the bees. The foundation has a tendency to stretch slightly in a vertical direction, hence I have found it best to let the foundation be at least 1½ in. shorter than the depth of my Gallup frames; then it does not stretch to the bottom, and there is no danger of bulging. It is best to have the foundation extended across the frame to about half way down from the top, so as very nearly or quite to touch the sides of the frame. Then the bees fasten it at the sides sooner; but if it is left an inch or more from the sides they are sometimes slow about building it out laterally. Having some nice pieces of foundation that came more than half way down the frames, but lacked more than an inch of coming out to the sides, I found that the bees at once built this foundation into comb, and filled it with brood which was sealed before they chose to fill out the side spaces.

It is essential that the hives be carefully leveled before putting foundation in. A small level, which answers a very good purpose, can be bought at a hardware store for 25 cts. It is best to do this leveling with care, making the hives perfectly level both ways, then the foundation will be fastened by the bees to the centres of the side pieces.

In my frames there is a small slat for a comb guide, which fits into a groove in the underside of the top-bar and into a notch in the upper end of each of the side-bars. I have fastened the foundation by laying the frames over a board which just fills it up to the comb-guide, laying the foundation on this board and pressing it down to the top-bar, then by means of a knife-blade heated in the flame of a lamp, melting the foundation at several points, so that it adheres strongly to the comb-guide. This can be done quite quickly and has answered well in nearly every case.

One very hot day I put some frames of foundation into a strong colony, and on looking next day found that in two frames it had fallen to the bottom. On taking it out I found that quite a large space towards the bottom of each sheet had been partly built out into comb before the sheets had broken loose from their fastenings. May it not be true that in so warm a day it was comfortable for the bees to work near the bottom of the hives, and that so many bees congregated on the lower part of these sheets that their combined weight and the heat was the cause of the sheets falling down before the bees had fastened the foundation to the comb-guide?

My experience thus far is strongly in favor of comb foundation. The bees draw it out into comb readily and rapidly; the queen fills it at once with eggs; it gives frames of solid worker brood to the very corners; the brood prospers in all respects as well as in comb built by bees without foundation. It seems to me that it is a very important discovery in bee-culture.

O. Clute.

Keokuk, Iowa, Aug. 10, 1877.

For the American Bee Journal.

Dollar Queens.

Mr. Dadant labors rather hard to impress upon the minds of bee-keepers that imported queens are superior to the home-bred ones. I cannot see where he has gained a point. How it is that queens raised in Italy can be better than those raised in America under the same circumstances, is more than I can make out. Mr. D. has an idea that queens can't be raised for $1 each, that is, good ones. Now Mr. D., how much more than $1 each does the Italian or Dutchman get for his queens of whom you purchase them? It strikes me that the dollar side of the question is not all on this side of the water. I claim that the dollar part of it has nothing to do with the quality of the queens.

We have paid as high as $2 per bushel for corn here, now we get it for about 65c. The corn is just as good as that that cost us twice as much, but the producer don't get as much for it. The manner of rearing the queens is the point. Mr. D. has much to say about queens raised in nucleus hives. The best, largest, most prolific, long lived and the finest queens in any respect that I ever saw were raised in small nuclei hives—say hives that will hold 3 pints of bees. Now there is a way to raise good queens in nucleus hives and there is a way to raise inferior ones. Beginners cannot do it, and to raise good queens a man must have considerable experience. It is a trade to learn, the same as in everything else.

How do we know that all the queens raised in Italy or Germany are not raised in such hives? I wish some of those who have purchased such queens would tell us about them. I have said something about home-bred queens, etc., in another column, and in the Aug. number of the Journal.

Now if any of the imported queens have done better or even half as well, let me know it. If Mr. Dadant can afford to sell imported queens for about $6 each, and make a profit, then the person who supplies him can't get much over $1 each. It is a poor rule that don't work both ways; and if queens can't be raised for $1 in this country they can't anywhere.

H. Alley.

Wenham, Mass., Aug. 8, 1877.

For the American Bee Journal.

Raising Queens.

I will now fulfill my promise to give the Journal our method of raising queens and making swarms. The raising of queens and making artificial swarms are so much connected with our general management of bees that we cannot give them without expounding part of our general treatment of bees.

After winter some colonies are weak, others are strong; but according to circumstances of food, weather, prolificness of the queens, etc., it sometimes happens that some of the weak ones gain strength, and are in June as good as those which seemed the best immediately after winter; yet fully 25 per cent. of the whole number wintered remain too feeble to give, in June, any surplus honey.

Amongst our strongest stocks we consider those best who have the best laying queens and most active workers. Generally, these colonies have given us in the proceeding season a good crop of honey. We do not consider the color of the queens to be of the least value, if their bees are pure. Amongst these colonies we select, early in the spring, a few to raise drones. As we have replaced in all our colonies every drone cell by worker comb, we slip a drone comb in these selected hives, between two worker combs containing brood, and we feed these colonies to invite the queens to lay to their utmost capacity.

Now as all is linked together in the treatment of bees, I have to guard the unexperienced bee-keeper against a fault too generally committed—to feed in the day time. We feed after sun-down, and proportion the quantity to the strength of the colony, so as to have all disposed of before the next day. Our end in acting so is to prevent the killing *en masse* of the bees.

If you give the food in the day-time, or if all is not taken by the bees long before sunrise, the bees who find the food will fill themselves and give the good news to others. Of course some of the workers can imagine that honey is gathered inside the hive. There is honey in the fields they think, then every worker, after having seen the happy bees which have found the food, darts from the hive in search for honey. But there is no honey to be found in the fields; nothing but weariness, which is soon fatal to bees when they work with an empty stomach. If the weather is cold it is worse yet. The bees who leave the hive cannot come back, and are seen motionless, and half dead everywhere around the apiary.

If you feed the bees in spring, take care to give but little at a time, and for more security, shut up the hives till the agitation caused by the food has subsided, and thus prevent the bees from yielding to the excitement, flying out of the hive not to return. Sometimes, after the food has been regularly distributed for a few days, all the workers know where they have to look for it, and before flying out of the hive they visit the feeder. Then you can feed them in the day-time, without loss. But you cannot be too careful till all your bees have been accustomed to look where the food is distributed; for a great many colonies have been ruined by feeding intended to give them early strength.

Now I come back to my subject. Besides choosing colonies to raise drones, we also choose these from the brood of which we will raise queen cells.

As soon as we have a few drones hatching we divide our colonies into two parts, one of these parts, about 75 per cent. of the whole number, is strong enough to give honey. These colonies are left undisturbed, at least for the beginning of the season. By swarming these artificially we would diminish our chances of honey harvesting. By permitting them to swarm naturally, our chances of a good honey crop would be equally lessened.

To prevent these colonies from swarming we use wide hives. Our non-swarming hives have room for 11 Quinby frames, instead of 8; or 15 frames 12x12, instead of 9. Every non-swarming hive is supplied with one or two partition boards, leaving between them and the side of the hive, room where to put an empty comb. When the honey harvest begins, we look at some of these outside combs every evening. As soon as the bees begin to bring some drops of honey in these combs, we hasten to give all our non-swarming hives empty combs or surplus boxes, or both, to prevent them from getting the swarming fever, and we generally succeed very well.

The 25 per cent. colonies, too weak to give surplus honey in June, are intended to raise queens and make swarms. To this end we choose the most populous of these weak ones. We take out its queen and all combs containing brood; and brush from these combs every worker. Then we open one of our colonies intended to give brood to raise queens, and we exchange the combs of our weak colony for a similar number of brood combs; taking the same care to brush every bee from them before putting them in our weak colony. These combs having taken the place of those taken out, our weak colony being deprived of its queen has no other brood but that of a selected queen to raise queens cells with.

By this method we do not incur the risk of introducing a valuable queen in another colony. This queen continues to lay, and *nine* days after, we can deprive another of our weak colonies of its queens, change the brood combs of this last colony with those of the selected one, and so on as long as we intend to raise queens. If we have a great many queens to raise we act the same as with one or more selected colonies. By exchanging combs every third day, we have every third day queen cells ready for any emergency. Three selected colonies are then used to give the brood.

Nine days after the exchange of combs, our first weak colony has mature queen cells. We open the hive and count them. Suppose their number is 4; we deprive of their queen 3 of our other weak colonies, and the next day we insert a queen cell in every one of them. If something has prevented us from taking the queens out on the ninth day, we do it on the morning of the tenth, and give queen cells in the evening, at least 6 hours after the taking out of the queens.

To insert the queen cells we do not cut the comb, but enlarge the space between two brood combs; we place the cell between them, and by bringing the combs in their place, the cell is held in position. The workers will cover and hatch it as well as if it was inserted in the comb.

If, instead of Italianizing, we intend to make swarms, we act differently. As soon as our queen cells are ripe, we divide our weak coloniy in as many colonies, or nuclei, as we have brood combs, giving every brood comb a queen cell. Then we divide the bees equally, giving to each a second comb with honey. If we have more queen cells than we have brood combs, we deprive another weak colony of its queen, at least 6 or 8 hours in advance. Then we divide equally that colony in as many nuclei as we have queen cells; dividing also the bees as equally as possible. We shut up these small colonies for 24 hours, then we put every one of them in place; we also move the old hive at night, before its bees are flying. Before opening the entrances of these hives we put in front of every one a small slanting board, so as to interrupt the direct flying of the workers when they leave the hive. The bees seeing something unusual at the exit of the hive are led to examine the surroundings of their new location; and the old workers returning to their old place, not finding the old hive, will remember their new location and return to it.

Now these small swarms have to be examined after about 5 or 6 days, to see if the queens are hatching; and in case some are dead or doubtful, another queen cell can be given, after the one started by the bees in the nuclei has been removed.

Generally after 12 days the young queens are laying. Then there is no more worker brood hatching. We give to every nucleus a comb of brood taken this time from some of our strongest colonies, as the eggs of bees need about 35 days before becoming outside workers. We do not diminish by this loan the gathering forces of these colonies; as the bees of the brood taken would be too young to profit from the spring harvest. If we replace the brood comb taken by an empty comb, the queen will fill it with eggs, and these eggs will hatch bees fit for the honey crop of August.

Of course, in all these dividings of colonies it is understood that there is always honey in the combs, to prevent bees from starving and to promote breeding, in case of lack of honey in the fields. Bear in mind that there cannot be brood without honey and pollen. It is also understood that if these small colonies are lacking brood or honey, to become strong for the fall honey harvest, brood or honey, or both, are to be supplied from the strong colonies; which, having bees in full force, are able to spare one or the other, or both, without being the least weakened.

It is also understood that, as long as the honey harvest lasts, these small colonies ought to be managed as comb builders; for they make worker comb only. If they have been well cared for, every one of them will be strong enough in August to make its own provisions for winter. If the fall season is poor, some of them will prove unable to gather enough for winter; then an exchange of some of their empty combs with full ones of a rich colony, will be beneficial to both.

We have accustomed not to make more than one swarm for every two colonies wintered; *i.e.*, 50 per cent. of the whole number wintered. Our importation and the raising of queens for sale prevents us from making a greater number of swarms; yet with good management and in good years, the number of colonies could be doubled.

You see that by our method all our strong colonies can give honey to their utmost capacity; while all our weak stocks are used to start swarms or raise queens.

Another good feature of our method is to raise all our queens and drones from choice queens; and to replace all our less prolific queens by daughters of our best, started in colonies strong enough to raise good queens —our aim being to always better the sale of our bees. CH. DADANT.

For the American Bee Journal.

Notes from Kentucky.

FRIEND NEWMAN:—I enlose the following article on Bee-Culture, clipped from the *Herald and Presbytery*, by Rev. Dr. T. H. Cleland, of Lebanon, Ky., thinking it might be interesting to the many readers of the JOURNAL.

BEE-CULTURE.

What is sweeter than honey? Or what animal, bird, or insect affords a more wonderful, interesting, or profitable study than the bee? "Ten Acres are Enough," is a very interesting little book. But $10 invested in bee stock will afford more pleasure and profit than $20 in anything else. Many learned men, of great intellects, have devoted much of their lives to the study of this wonderful insect. There is such a fascination about it that it never fails to make enthusiasts of those who devote their attention to its culture.

IS IT PROFITABLE ?

A few facts will best answer that question. Riding one day on the train with a young man newly licensed and married, the conversation turned on bee-culture. He became deeply interested. Out of a very meager salary he devoted $50 in bee stock. He got Quinby and Langstroth and informed himself about the nature and habits of the bee. I presume this year the product of his apiary is equal to $500. The time necessarily devoted to their care is a most delightful recreation. But for his bees he could not live on his small income. A stand of bees given to a brother in the ministry, a few years since, is now worth to him several hundred dollars, and the enthusiastic delight he takes in their culture and study of their habits is worth ten times as much more.

During the late war, two things the soldiers always went for — onions and honey. They robbed me of every hive but one. At the close of the war I bought three hives—two old box hives and one Langstroth, of hybrids. That year the patent hive sent out three swarms, and the first swarm sent out another. In 3 or 4 years I owned 35. Part of these I sold, and reserving 20, moved to the country. The next year I realized more money from my honey than my whole farm. True, after this many of them fell victims to the "bee cholera." So that this year the season opened with only 14 stands, but now I number 36, with "honey to sell and to keep." Now how about the trouble? It has been to me a living pleasure, a most healthful recreation.

BEE-STINGS.

"Ah, but they bite—they sting me so terribly—I am afraid of them." Nonsense. "They have honey for their friends, but a sting only for their enemies." Get the Italian bees, and be kind and gentle with them. They will soon come to know you, and you to love them. An old Shaker once said to me: "If you will approach a bee with a *circular motion* they will not sting you." True, but the philosophy is not in the circle, but in the *deliberateness* of the motion. If you are afraid of them and allow yourself to become excited and angular in your movements, they know it in a moment, and take you for a robber, and pop you. But perhaps you are ready to say, "I can't help being nervous and excited." Yes, you can. You may easily shield yourself against them. Take a half-yard of tarleton and sew it up like a bag, leaving both ends open. Now run a draw-string—gum-elastic cord—in each end, and draw it over your hat, and the lower end under your chin, and your face is safe. A pair of gum gauntlet gloves on your hands, and they are safe. And now "though they compass you about like bees," they can't harm you any more than did David's enemies. You can afford now to be easy and gentle, and presently, 9 times out of 10, you will forget these appurtenances. You will not be afraid to go out among them, and to hive a swarm of 40,000 without even a hat on your head.

I prefer the Italians. 1. Because they are much less liable to sting. 2. They are a larger bee, with a tongue one-third longer, enabling them to extract honey from flowers the little blacks can't reach. 3. They multiply faster. 4. They swarm earlier in the spring. 5. Work earlier and later in the day, etc. Many curious and very interesting facts touching their natural history, habits, living and management, etc., must be reserved for a future number. T. H. C.

In the late war, one thing seems to be remarkable—the soldiers in most cases left one stand. In October, 1862, during the retreat of Braggs' army from this State, their rear was covered by Morgan's gueriellas, and my bees were not taken till the third day; when the Morgan boys came up they went for them at once, taking all but the largest and strongest. I only had 9 stands at that time. From this one stand my increase was taken, which, during the last 10 or 12 years has brought me from $500 to $1,000 every year, except 1868—the year of the great bee cholera, that Dr. Clelland speaks of. Though I lost not a single stand with the cholera, I made no profit that year as it was a very poor season here. To prevent too much feeding, I doubled up 26 stands to 13, and wintered every one. The next season I increased to 52, and took 560 lbs. of cap honey—there being no extractor at that time. I sold the honey at 35 cts. My success has been—no loss in wintering, a good sale of bees every spring, besides honey for sale at all times. R. M. ARGO.

Lowell, Ky., July 7, 1877.

For the American Bee Journal.

Dollar Queens vs. Imported.

From the last article of Mr. Henderson, it seems that dollar queens cannot be raised profitably with colonies paid to their real value. If so, somebody loses money in this cheap production. Mr. H. was offered full colonies in Langstroth hives, with 21 frames, for $5.50, and refused, because he could buy cheaper. These parties were losing heavily, for the valne of these colonies can be estimated thus:

Hive (21 frames)	$2.00
21 combs	2.00
30 lbs. of honey at 10c	3.00
1 tested queen and brood	2.00
Net value	$9.00

Then the dollar queen business wants that somebody loses money.

Now Mr. H. changes his batteries to direct them against imported queens, which had nothing to do in this controversy. He quotes Mr. Argo, who has imported impure bees. Mr. H. knows very well what has been my answer, and that Mr. Argo did not reply. The bees imported by Mr. Argo were not Italians, but Tyrolian bees sent as Italians by Ed. Uhle. I was informed of the fact by our late friend Nesbit, who was in partnership with Mr. Argo, of this importation. Mr. Argo will not deny the fact.

As to Dr. Brown, I have offered to him, to Mr. Andrews, to Mr. King, and I offer now to my opponent, to have an inquiry made in Italy about the purity of bees. If impure bees are found, I will pay the cost and give my opponent $200. If no other but pure bees exist, he will pay the expense only. I have received and sent imported bees by the hundred without testing them, and I have had so few complaints that I am satisfied of the fact. Most of the complaints came from queen-breeders, who owned the old kind of yellow bees.

Let us see how it is that some queen-breeders do not like imported queens. These breeders are few and amongst the sharpest. They have very yellow bees; some have queens yellow to the tip of their abdomen, and workers with four yellow bands. If a daughter of these queens chances to mate with a black drone, her workers will lose a yellow ring, but will have yet three left. Therefore this young queen can be sold as pure; although being as much impurely mated as possible.

Mating with a half-bred drone she will look purer still. The percentage of pure-looking queens raised from such a stock will be very great; not to say that every daughter of these queens will be pure as to the color of their workers. Of course as to the working and laying qualities, they will partake of both parents.

It is not the same with imported queens. Their progeny is darker, and the smallest mixture of impure blood in the drones who mate with their daughters will be visible on the workers. Hence the dislike of these shrewd queen-breeders for imported stock. The profits are greater with the yellow stock; that makes all the difference.

I could show many letters complaining of the small number of pure mating of the daughters of imported queens. If the drone, mating with the daughter of an imported queen, is not of absolute purity, the result is impure workers. On the contrary, if the drone mating with the daughter of improved yellow bees, is impure, the impurity will be drowned in the previous improvement in color.

I defy all the breeders and lovers of yellow bees to deny the above facts; for I can prove it by the letters of many of these hard-to-please breeders. Hence the yellow kind is better, and more profitable to the queen-breeder, while the imported is more profitable to the honey producer.

CH. DADANT.

For the American Bee Journal.

Chips.

One writer in the last number says that not much will be heard of the Italian bees after they have been excluded from the mails. You are mistaken, my good friend. There was a good deal said about them before any were ever sent by mail. He keeps black bees, and of course is behind the times. Try the Italians my good friend, and you will have reason to change your mind in regard to them. Your neighbor must have a pure lot of Italians, with black bees on your side of the fence and Italians on the other! Most bee-keepers owe their success to the Italians—so say all the bee papers.

BEES BY MAIL.

Some time in July I sent 3 queens to customers in California. I forgot to ventilate the cages, and it did not occur to me that I had not done so until they had left the post-office. However, I had an idea that they would go safely. They were 8 days in the mail and laid 2 days in the office after they arrived there, and then turned out all right. So bees do not need so much ventilation after all. We have sent out 500 queens thus far, and only 8 died during transit; and not one has been reported impure, and all who have said anything about them report that the workers are beautiful. Nine out of every ten who acknowledged the receipt of their queens wrote thus: "They are the handsomest queens I ever saw."

I am now registering orders for 1878. Already have 26 booked for next year. I hardly think that any of my customers have raised any black drones from the queens I mailed them. The idea that black drones can be raised from Italian queens is a queer one. Had I not started with 250 orders in the spring I might have filled orders as fast as they came in. I am hard pinched all the time for queens. I still have between 200 and 300 orders ahead, but hope ere this is read by my impatient customers to have them all filled. Have upwards of 200 queens at this time. It is impossible to fill orders by return mail in all cases.

THE SEASON

Has been the poorest for honey, and the most unfavorable for queen breeding we have had for many years. Have had ten days at a time when no queens were fertilized.

ITALIAN VS. BLACK BEES.

Here is a nut for Mr. Porter and Mr. Anderson to crack. I make the following extract from a letter received to-day from Mr. Jno. F. Hobson, of Winchester, Va.: "My bees have done very poorly this season, and not much better last. My bees are all black and I am tired of them. Others around here have the Italians, and make an average of 30 to 40 lbs. of honey per colony." A very good report.

I would like to say that nearly all my queens (except those in nuclei hives) were sent by mail, and I have no trouble in shipping them that way. H. ALLEY.

Wenham, Mass., Aug. 14, 1877.

For the American Bee Journal.

Various Topics.

WINTERING.

EDITOR JOURNAL:—We are, all of us, more or less anxious about wintering our bees, and desire to compare notes with those who have had success as well as failures. We have known veteran bee-keepers become so confident in their successful wintering as to make a boast of it, and yet in an hour, so to speak, loose all their possessions in bees. We know of one such who lost once 100 swarms after several successful years; and the loss caused such a reaction of disappointment and disgust that he will not look at a swarm of bees, and is inclined to avoid the subject entirely.

That the kind of food has much to do in successful wintering is patent to every bee-keeper. And the kind of honey my bees are now gathering leads me to write this, to obtain if possible a little information.

OUR HONEY SEASON.

The season has not been favorable for a large yield. Since July 20th the bees have barely made a living, and now buckwheat is giving but little honey. Observing bees winding their way to the forest, we followed them to their pasturage and found them at work upon honey-dew. It is generally the impression that this is deposited by aphides, but we found no insects upon the trees. The species of trees upon which it is found is beech and maple. The honey obtained is quite light-colored and of pleasant and I think slightly acid taste. As some of our swarms were quite scant of stores at the commencement of this yield, this honey will constitute their winter's stores.

Now, has any one had experience with this kind of honey for wintering? Is it a healthful food for the purpose? We hope to hear from those who have had experience with it.

COMB FOUNDATION.

We have given pure yellow foundation thorough trials, every way, and find it a decided success. Bees build it out quite rapidly for brood combs and the queen soon occupies it with eggs. For surplus honey the yellow foundation is drawn out and bleached to the whiteness of snow. Our choicest honey is in foundation, and the consumer cannot tell the difference between this and that built by the bees. We shall use it liberally another year.

WHITMAN'S FOUNTAIN PUMP.

At the commencement of the present season we purchased a fountain pump. We have to speak a word in its favor. It is good for controlling swarming, and we know of an instance where a swarm was brought down while in full career for the woods. We also find it very convenient for destroying drone brood. Put the rose on the nozzle, lay down the comb, force the water into the cells, and young brood and eggs will be thrown out.

J. H. MARTIN.

Hartford, N. Y., Aug. 15, 1877.

For the American Bee Journal.

Introducing Queens.

I noticed in the July number of your valuable JOURNAL, a few lines from the worthy and reliable pen of Ch. Dadant, giving his idea of Bro. Alley's method of introducing queens; he seems to think that it is not a safe and reliable method. He says that he has given it a trial and finds that when honey is scarce, the weather cold, or the queen to be introduced is strongly scented with dysentery or from other causes, that it is not safe to introduce by this method.

Now as the object of your JOURNAL is to diffuse knowledge through the bee-keeping fraternity, I will try to give you my idea of introducing, hoping that some one may catch my idea and be benefitted thereby.

In the first place let me say that I have adopted Mr. Alley's method, with a few exceptions, and find it a success in the object to be gained—a quick, safe, and reliable method. Now in order for us to be quick, we must be safe. It has been most thoroughly demonstrated that queens are generally recognized by scent. Now I will give you my method.

First I prepare, by having a light box with a cover having air holes in the top covered with wire, a roll of cotton rags handy; then light the roll and blow some smoke into the hive (rag, not tobacco smoke), at the same time rapping the hive a few times to frighten the bees. Now give them plenty of time to fill themselves with honey—say 10 to 15 minutes. Now blow some tobacco smoke into the hive to quiet them, and remove the frames until you find the old queen. After removing her, brush all the bees either into the bottom of the hive or into a box kept for the purpose—as before described. Now smoke the bees with tobacco until they are thoroughly scented and under the influence of smoke. Be careful not to induce vomiting by using too much smoke. This, like everything else must be learned by practice. The object of using the smoke is to scent them thoroughly and alike, and so stupify them that they will be insensible to the loss of the queen and will recognize the other as their own.

After the bees are in a proper condition, uncage the queen, let her loose with the bees, after blowing some smoke upon her; then mix the bees thoroughly, having the queen in the centre of the mass of bees. After allowing her to stay there a few moments, to become thoroughly scented, replace the bees into the hive, which finishes the operation. This is a perfect, speedy and safe method, and I am only too willing to adopt it. This is Bro. Alley's method with a few exceptions. It is very much like the method of A. C. Attwood—given in the July number. I dislike besmearing the bees with honey.

I am willing to guarantee 90 per cent. of all queens that I introduce by my method, at any time of the year, or any condition of the honey season, and regardless of how strong the queen may be scented.

There has been quite a controversy about queens and queen-raising. Let me say one word in Henry Alley's favor. I have been a frequent visitor there and have spent one week at a time studying with him, learning as thoroughly as possible all about bee-keeping. I have never seen him send an impure queen or one that was not well marked. He seems to take pride in furnishing the best queens possible. Also his queens used by me have produced the most beautiful and most active Italian workers that I have ever seen. I have just introduced a young queen from an imported mother lately purchased by him. I have always known him to be an honest, reliable and upright man, and I feel justified in saying that every person dealing with him will be used in a gentlemanly manner.

In smoking my bees, I use the Alley smoker, consisting of a tin tube about one inch in diameter, with a plug in each end,—one having a small tube ¼ inch in diameter through it, and the other intended to fit the mouth. I use tobacco altogether, and like it best, because you can use both hands to work with.

I have kept bees for 7 years; have but few swarms now. I use the Bay State hive. The honey crop is poor this season.

Salem, Mass. SILAS M. LOCKE.

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☞ Over two thousand tons of beeswax are used annually in England, at a cost of two millions of dollars. The "busy bees" have lots of work before them to supply this demand—as well as the constant and increasing demand in this country.

For the American Bee Journal.

The National Convention.

Mr. J. S. Coe has completed arrangements with the American Institute for the next meeting of the National Society. For full particulars we refer to the following letter from him. We hope bee-keepers will take an interest in this meeting and make it a grand success—one creditable to American bee-keepers in general. Especially would we urge upon our Southern friends to send in samples of their honey. We have a good yield from the honey-dew and poplar, let them be samples of each on hand. We believe that if the *fine* flavor of our poplar honey was better known, it would be *preferred* and command the best price in the market, notwithstanding its dark color.

W. J. ANDREWS.

MONTCLAIR, N. J., Aug. 9, 1877.

WM. J. ANDREWS, *President:*

Dear Sir:—I beg leave to state that under your instructions I have made the following arrangements for our coming convention to be held in the City of New York on Tuesday, Oct. 16, 1877:

The managers of the American Institute have granted to the American Bee-Keepers' Association, table space for the exhibition of honey and wax, and floor space for the exhibition of hives and all other apiarian supplies.

One fee ($7) only will be charged.

The entry is to be only for exhibition and not for competition.

Each delegate to the convention will receive three single admissions—usual exhibitor's tickets.

H. K. & F. B. Thurber & Co., agree to receive all apiarian products and supplies to be exhibited by the American Bee-Keepers' Association at the American Institute in New York, and have them all properly arranged for exhibition *free of charge.*

If notified by letter or telegraph, of the shipment of honey they agree to have it removed by *careful hands* to the exhibition building, so that it shall not receive damage.

They agree to pay the highest market price for the honey and wax at the close of the exhibition, and account for the same to the party making the shipment.

I have procured the use of a hall in which to hold our convention, free of charge.

Arrangements are made at the Brigg's House, near the Grand Central depot, for the accomodation of our delegates, at greatly reduced rates—lodging, 50c. per night; meals, from 25c. to 75c.

So far, no reduction has been obtained on railroad fares.

Exhibits should be sent in by the 12th of September, or as soon after as possible.

All exhibits consigned to Messrs. Thurber & Co. will be transferred from the depots and piers by experienced hands, and placed in position in the Institute building free of charge. And after the fair they will either buy, sell, or ship back.

Arrangements have been made by the friends of the Association to offer a Gold Medal, to cost not less than $50, to be known as the "Thurber Medal," to be awarded for the finest sample of honey in the most marketable shape. To be contested for only by producers.

We have written Mr. Langstroth, inviting him to attend the convention, and have provided for his entertainment while here.

Special circulars will be issued in a few days, and can be had from the same parties who have the shipping cards and certificates of delegates.

Shipping cards can be had by applying to H. K. & F. B. Thurber, New York; AMERICAN BEE JOURNAL, Chicago; *Bee-Keepers' Magazine*, New York; *Gleanings in Bee Culture*, Medina, O.; Wm. J. Andrews, Columbia, Tenn.; J. H. Nellis, Canajoharrie, N. Y.

Delegates' certificates can be had by applying to Wm. J. Andrews, Pres., Columbia, Tenn.; J. H. Nellis, Sec., Canajoharrie, N. Y.

These very favorable arrangements are largely due to the Messrs. Thurber, and I cannot speak too highly of their substantial evidence of the interest they take in the prosperity of our society.

Very respectfully yours,
J. S. COE, *Vice-Pres. and Committee of Arrangements.*

The following correspondence will be of interest:

"New York, Aug. 14, 1877.—HON. PETER COOPER: *Dear Sir*—The bee-keepers of this country intend holding a National Convention next October. They will make the finest display of bees, honey, beeswax, and apiarian supplies ever made at any fair, at the American Institute building. Exhibits will probably be sent from every State in the Union. As this is their initial meeting here, they have no hall, and no funds in hand to hire one. We write you to know whether you would not like to supply this want. We understand there will be 500 delegates, and we would thank you to indicate your will in this matter as soon as you conveniently can, that it may be published in the bee journals and agricultural papers generally. Respectfully,
H. K. & F. B. THURBER & CO."

"New York, Aug. 14, 1877.—Messrs. H. K. & F. B. Thurber & Co.: *Gentlemen*—Mr. Cooper will give the use of the Large Hall, under the auspices of the American Institute. Respectfully,
JOHN W. CHAMBERS."

[This hall is one of the finest in New York city, and we trust that it may be well filled with bee-keepers, and that there may be a full display of all kinds of apiarian supplies for the inspection of bee men from every State of the Union as well as visitors from other countries. Let there be a general rally and good display. We expect to be present and will do in our power to make both the meeting and display of supplies a success.—ED.]

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Comb Foundation *is* a success. That point has been settled by the present season, if we may believe the reports as they come in from those who have used it.

For the American Bee Journal.

My Queen Cage.

FRIEND NEWMAN—I notice an invitation to those having anything they think of use to bee-keepers to send it to your office.

Herewith I send you a description of a new queen cage for introducing. I see that almost every one agrees that when the queen is liberated it should be done with as little excitement as possible. Mr. Dadant says: "Put in a comb stopper, and let them gnaw it out." Mr. J. F. Spaulding (my neighbor) says, he had one graw out this summer, but instead of the queen coming out the bees went in, and the queen did not get out for 2 days.

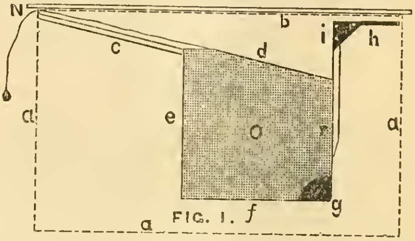

FIG. 1.

You can open my cage the whole width without opening the hive, and there is not a place that there is a possible chance to catch or kill a single bee inside or out. I would send you one, but I thought you could make one cheaper than the cost of sending.

EXPLANATION OF PLATES.

Fig. 1, is a representation of cage closed.

Fig. 2, the cage open.

a, *a*, *a*,—dotted lines,—the inside dimensions of hive.

b, honey-board.

c, top-bar of cage, which is ⅝x⅝ in.

e, one perpendicular bar, and *f*, the bottom bar. Both should be about ⅝x⅜ in.

The wire-cloth, *p*, in fig. 2, should be tacked to the bar, with some small brads.

d, sliding bar with some little tins tacked on the back side to keep it from sliding off.

The wire-cloth, *o*, is tacked to the bars, *d* and *e*.

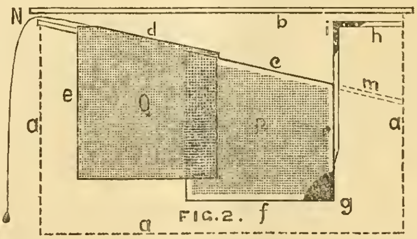

FIG. 2.

g, is an isolated corner with tin plates tacked on, to keep food for the queen.

h, is a projecting arm or bar which rests on the rabbet of the hive.

i, is a metal corner of galvanized iron.

n, is a small wire fastening on the end of the sliding bar, *d*, and reaching to the outside of the hive.

If you choose, you can lengthen the bar *e*, as at *m*, and fasten it into an empty frame, dispensing with the arm or bar *h*.

You can make the cage any size you like; I make them 7 in. each way and about from ½ to ⅝ in. thick.

DIRECTIONS FOR USE.

Place a small piece of sponge saturated with honey or syrup, and put the queen in with 5 or 6 workers—those that have been with her previously, if you have them—and close it up. Take out a comb from one side of the hive you wish to introduce her to, and spread the brood combs a little, and make a space in the centre large enough to slip the cage into the hive, letting the wire *n*, hang over the top of the hive, and put on the honey-board or quilt. When you wish to let her loose, take hold of the wire, *n*, and draw slowly and carefully until the cage is open. In this way the bees will not know that anything has happened.

Floyd Co., Iowa. LEVI SUTLIFF.

For the American Bee Journal.

A Prolific Queen.

MR. NEWMAN:—Judging from circumstantial evidence, I should say I must be the person alluded to by Mr. Alley in the August number of the JOURNAL, where he speaks of a lady in Waverley who has had good success with her bees.

Now, I know that I have not done anything wonderful, yet I do think I have had one remarkable queen, and should like to tell you a little about her. She came in a full stock, which I purchased of Mr. Alley in the spring of 1876. I saw her several times and she was very large and yellow. Having been transported about 30 miles by rail, and 7 or 8 miles in a wagon, the bees were not in a condition to swarm early. They increased fast, however, and on Aug. 7th, they sent out a powerful swarm. I put this swarm into a Bay State hive, which had been furnished with pieces of comb foundation 1½ in. deep. In less than ten days they had filled every frame two-thirds full of comb. A large part of this was drone comb, but Mr. Alley came and cut out some of it. After this the bees were left undisturbed, except that they were fed daily with sugar syrup. When winter set in, only a few cells in the rear comb had been capped over. I put a piece of blanket around the brood chamber, and left the hive on its summer stand.

In the spring the bees were more lively than those in other hives, and I thought they must be hungry. I began feeding them with a little syrup, and increased to a gill a day. I did not give them any flour, as they began on March 27th to bring in natural pollen. On May 17th they swarmed. A frame of comb and honey was taken from the parent hive and given to the new swarm.

All the queen cells but one having been cut out from the parent hive, no other swarm issued, but on July 17th, just two months from the time it was hived, the May swarm sent out a swarm, and on July 23rd it sent out another. So that a new stock, put into a hive on Aug. 7th, 1876, had increased by natural swarming to four stocks by July 23, 1877. Two of these stocks are rich in bees and honey, and the other two are doing well. They have capped brood in most of their frames. I have fed them and shall continue to do so. The one I have called the parent hive has 12 boxes nearly filled with comb, but I fear there is not much honey in it. The original stock that I bought in the spring of 1876, has not swarmed this year, but it has given me some extracted and box honey.

But where is my famous queen? Both of the July swarms have young queens. I tried to examine the May swarm to-day, thinking she might be there, but when I had taken out 7 frames the bees became cross, and I put them back.

Perhaps I ought to say here that, although an elderly person, I am not an experienced bee-keeper, as I had never seen any bees, except at a very safe distance, until the spring of 1875.

I have had good success with comb foundation, when used in narrow strips. When I used it 6 inches deep, it always warped. Mr. A. Wyman, of Arlington, Mass., has used a great deal of it this season. Perhaps he will give us his experience.

The Bingham smoker is just what I wanted. Yet I think, for one who does not object to the taste of smoke, a mouth pipe would be better; it leaves the hands free.

One item more. I never had any black drones. Some of my drones are darker than others, but none of them look like those in a hive of blacks. I have far too many of them. I intend to have the drone comb cut from my hives next spring. I fear I have enough of those huge feeders now, who eat more honey than the workers can gather now, as the best of the honey season is over. E. B. KENDALL.

Waverley, Mass., Aug. 13, 1877.

For the American Bee Journal.

Strange Things in Bee-dom.

HONEY FROM A STRANGE SOURCE.

Several years ago, when the seventeen-year locusts visited us, I noticed, one morning in August, that the bees were going to the woods pretty lively. There were no flowers in that direction, and the weather was such that no honey-dew could be looked for. I followed them to the mountain, and there among the rock oak, their busy hum could be heard for a considerable distance. An examination proved that where the locusts had punctured the small branches, a sweet substance exuded, which the bees were collecting in considerable quantities; in fact some gathered 20 ℔s. from this source. Its taste was rather unpleasant, but the bees wintered well on it.

A PLEASING SOUND.

While the bees were working on this substance one cool morning, about sunrise, the fog was stealing softly up the ravine towards my apiary, which is situated at the end of a deep ravine, the workers had then made their first sally. In a moment everything was shrouded in one of those thick fogs that come in a moment and are gone as soon. Just at that moment I came to the scene of action; no bee was visible, except one now and then issuing from a hive, but as quickly returning. I heard a strange sound as it were in the clouds, increasing in volume. It was the sound of the main force of 50 hives—heavy-laden bees hovering above the thick fog in vain trying to find their hives. It was a soul-thrilling sound, only to be heard once in a lifetime. Half-a-dozen swarms on the wing at once, is nothing to be compared to it. Like everything else, it came to an end. The sun gently lifted the fog, and then such a rush—the approach of a sudden shower would never produce as much commotion.

EFFECT OF A BEE STING.

In this same fall, while working among my bees, I was stung on the third finger of my hand. In an instant my whole hand was paralized. The comb I happened to hold in my hand dropped. The pain was severe; it was sore to the touch for three months, and for a whole year when the part was rubbed an unpleasant sensation was produced. I have kept bees for 20 years and have been stung in every part of the body, but never with such effect.

A BEE IN THE EAR.

One day while carrying a swarm of bees on my shoulder, up a steep hill, my foot slipped and I fell on one knee. The cap slipped to one side, so that the bees rushed out, and being close to my head, many were about my ears. One entered my ear and was trying to enter my head; with one finger I tried to remove her, but that made matters worse. I pulled off the abdomen, but the head and thorax entered my head. It was a terrible feeling, and I am satisfied no man could long stand it. I did not know what to do, but in the terrible situation I started for a doctor—happily, on the way the front part of the bee crawled out again.

TWO BEES ROBBING EACH OTHER.

One day in April, this year, I noticed one of my bees robbing another. They were of about equal strength. I at once changed stands, but the next day, to 'my surprise, I found the robber bees (now in the other hive) robbing their late home. I changed them several times, but always with the same result, and at last to my astonishment I found them robbing each other. I left them thus for two days, the excitement continually increasing. No pollen was gathered from flowers, all their energy was directed to robbing; they both had considerable honey, bnt it was nearly all used up during this excitement.

New Berlin, Pa. R. B. Oldt.

For the American Bee Journal.

Cyprian Bees.

Nearly all my visitors admire the beauty of the Cyprian bees. The queens are larger and more beautiful than any queens we ever saw. The drones are of a deep red or copper color, and when they mingle with the red workers they look nearly a blue color. All the bees when hatched look nearly white. The workers are very tapering, with six bands encircling their bodies; and at the side of them are two white, downy spots running lengthwise. Their superiority in working qualities cannot be over-estimated, as can be proved by dozens of visitors.

One hive (No. 7) swarmed five times naturally in 18 days; before it swarmed it gave 154 ℔s. of surplus honey, and filled 9 Quinby frames of brood. The swarms have filled 58 frames of brood and given 192 ℔s. of surplus up to date (Aug. 18); making in all 67 Quinby frames of brood and 346 ℔s. of choice cap honey, which I sold to Adcock & Bro., of Macomb, Ill., at 20c. cash ($69.20). Then I reared and sold 12 queens for $60, and sold 5 of the swarms, at $10 each, to M. Brown, Industry, Ill., cash $50. Making $110 for queens and swarms. The grand total is $179.20.

The Cyprian bees beat the world. I intend to sell my common stock at $5 each, and leave none in my apiary. I have a pure gray queen from D. Staples, which is a beauty, and I have 3 Egyptian queens, bought of Mr. Ayres, of Springfield, Ill., which are very large.

The season now is better than I have seen it for many a year. Have taken from 125 colonies nearly 3,000 ℔s., and expect 2,000 ℔s. more.

My Cyprian bees will be at the McDonough Co., Ill., fair, Aug. 27th to Sept. 1st; and at our B. K. convention at Oquawka, Ill., Oct. 2nd. Hardin Haines.

Vermont, Ill., Aug. 18, 1877.

For the American Bee Journal.

A Visit to an Illinois Bee-Keeper.

Being but a novice in bee-keeping, and by chance being slightly acquainted with Mr. D. D. Palmer, of Eliza township, Mercer Co., I made him a short visit on June 11th last, and found him busy with his apiary, consisting of about 130 stands of bees all in first-rate order, etc.

But as a litte knowledge creates a desire to possess more, I took another trip to his place and found that his bees had increased to over 200 stands, and yet on Aug. 8th they gained bountifully. I found that the extractor had been used on 10 hives, from which he had taken 500 ℔s. of honey of the purest quality. From the remainder he had taken 4,000 ℔s. of box honey, most of it in boxes made up of sections. By the end of the season he will swell his amount of honey from 10,000 to 12,000 ℔s. Let me say that everything pertaining to the business is done on strictly scientific principles. So much for the honey part. Mr. Palmer is also engaged in the cultivation of small fruits. He has a raspberry that is a seedling, which he has named "Sweet Home," that bids fair to outstrip all known varieties both in hardiness, size of berry, and unequalled productiveness. He is also planting many other varieties, as well as grapes, etc.

Mr. P. gave me the August number of the Journal, in which I find an article from a Mr. Anderson, of Lawrence, Ill., in which he says, under date of July 9th, 1877, that in the spring he had 80 stocks of black bees and has doubled the number and taken 100 ℔s. of white clover honey, and some stocks less than 10 days old had stored over 15 ℔s. of honey in boxes.

The probability is that the whole swarm went into boxes when first hived. He winds up with a comparison with some black bees just over the fence, that had proved themselves inferior to his in every respect. I would just ask Mr. A. with much respect, where his bees are by the side of Mr. Palmer's?

On my first visit to Mr. P., I obtained of him two nuclei of Italian bees, and without any additional brood or anything else, they have each of them filled a hive containing 18 frames, 12 in. square in the clear, and will weigh more than 100 ℔s. each.

In conclusion, permit me to say a few words in regard to a grape whose origin is in obscurity, as no traces of it can be found farther back than through the hands of two nurserymen, when all trace is wholly lost. I have handled it for 3 years and it has proved itself fully as hardy as the famous Concord, and much larger, as well as a far better grape than the Concord, and has, for the last 4 years, been fit for market on Aug. 13th. It will have an unbounded run, etc. This is the first that has been said of it outside of my own circle of friends.

C. HOTCHKISS.

Rock Island Co., Ill., Aug. 8, 1877.

For the American Bee Journal.

Bees and Red Clover.

As it seems to be doubted whether any bees do actually work on red clover, let me say that my bees do, and they are blacks. Two or three years ago a Mr. Coffield, living in Caledonia, 5 miles north of me, got a queen or two from Mr. Quinby, and my young queens seem to have met his drones; for stock hives that I know were common blacks now show from one to three bands, and are better dispositioned, but most of my stocks are black, and out of hundreds that I have seen on my common red clover, not one showed a yellow band. I heard of them working on it all spring and summer, but being very busy and hardly crediting what the children said, did not notice it myself till August 10th, when crossing a field of second crop. I found them all over gathering honey and a very dark amber-colored pollen. Mentioning it to my wife, she says positively she saw them on the first crop, too, which was very rank.

WM. CAM.

For the American Bee Journal.

Notes on Queen Rearing.

I have raised 75 queens since July 8th. I made a hive to hold 11 frames; put 3 division boards in it, which divide it into 4 apartments. The boards must fit close, so that the bees cannot pass, or they will all go together and save but one queen. Cut a small entrance on each side to give each apartment an entrance. In this way four queens can be fertilized in a colony at one time, just as successfully as I can in a nucleus, a rod from any other.

Take the queen from any colony desired to breed from; let it raise cells just as they are sealed over; slip in 3 division boards, cutting it into 4 apartments of 2 frames each. Let its 4 queens begin to lay; then 3 can be used and the colony be thrown together as before. This is the simplest plan for queen-rearing I have ever tried. By this plan 4 splendid queens can be raised in any colony at any time, and the colony not broken up, and can always be left in good condition. Two queens can be raised in one hive, just as easy, by fitting in a division-board and arranging the entrance block to make a small entrance at each side. Two will fertilize at same time.

I use Langstroth hives. Queen cells should always be raised under precisely natural circumstances, *i. e.*, just as they are in natural swarming, when honey is coming in, the weather propitious, and colonies strong with workers. These conditions should be maintained through honey dearths, by feeding.

Novice's plan of moving an old colony, is very good for raising cells until we get all the nuclei we want. Cells from these nuclei may be grafted into 4 nucleus hives, when their young queens are removed, and in 10 or 15 days they will have 4 more young queens ready for use. A good queen may be raised with a few bees, in warm weather by concentrating their whole force on the cells, by putting in just some larvæ. These plans are perfectly practicable. I have tested them after having had years of experience.

I want to answer a few questions: First, there are no black bees nearer than a mile of my apiary, and only 5 or 6 colonies within 3 or 4 miles of it, and 97 out of 100 queens fertilized in my apiary are pure, and perhaps a larger per cent. than this. I have 100 colonies, all pure Italians, carefully bred from the very best imported queens.

Those procuring queens should state whether they want light-colored ones or not; daughters of imported queens are nearly always dark. Newly-imported queens are always darker than American-bred. My imported bees have gathered double the amount of honey that others have.

JOHN ROOKER.

Noblesville, Ind.

Letter from Germany.

Enzheim, Alsace, July 20, 1877.—"MONS. T. G. NEWMAN: *Dear Sir*—I receive your BEE JOURNAL with pleasure. It is intensely interesting. I do not see how you *can* fill it so full of such very instructive matter.

"The year 1877 has been not very favorable to apiculture here. The crop of bees has been, so to speak, *nil;* that of honey is far below the average. Had it not been for the fine weather in June, our bees would have starved to death. The Society of Apiculture in Alsace is prosperous. It comprises 22 branches with 1600 members. It is beginning to spread itself in Lorraine—thk adjoining province which Germany tooe from France in the late war. with this also. There two branches have already been started and several others have been formed. The organ of our Society is *L'Apiculteur Alsacien.* It will after the 1st of next January probably appear in both provinces, and languages—French and German."

M. DEUNLER.

For the American Bee Journal.

Western Illinois B. K. Meeting.

The Western Illinois Bee-Keepers' Society will meet at Oquawka, Henderson Co., Ill., Tuesday and Wednesday, October 2nd and 3d, 1877. All persons interested in bees and honey are respectfully invited to come and bring any hive, extractor, or different kinds of bees and honey that they can.

Come and talk bees, and have a good time in general. Reduced rates at the hotels will probably be obtained.

HARDIN HAINES, *Sec.*

WM. M. KELLOGG, *Pres.*

Notes and Queries.

Sumter Co., Ala., Aug. 9, 1877.—"Please answer the following questions through the next JOURNAL.

How often ought combs in the brood chamber to be removed?

Would you permit empty combs to remain in the hive, in the surplus department, for protection through the winter?

What causes foul brood?

SUBSCRIBER.

[1. They will do to breed from for 8 or 10 years. When cells are so small as to make bees under size, then discard them.

2. Perhaps so, South; not here. North, remove frames and fill in with chaff. Always remove partly-filled frames or boxes, which it is desirable to keep white. It is desirable to keep a perfectly tight box, in which all surplus comb honey and comb may always be kept when not desired in the hives.

3. Supposed to be caused by a minute plant or fungoid growth. What causes the plant to grow is an obscure question.—A. J. COOK.]

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1. Do bees in natural swarming take a *bee line* for the spot where they alight? and how far are they likely to go before they light?

2. Do they select a spot before leaving the hive?

3. How late in the season will a colony in this latitude continue to have brood?

4. In the absence of brood in the hive do bees gather pollen, *i. e.*, do not bees gather pollen in proportion to the quantity of brood?

5. Will a colony for a time gather honey as well without a queen as with?

6. Is there a necessity for openings in the honey-board? They usually cover the openings, I notice.

I commenced an apiary the past spring with two colonies of hybrids. One soon became queenless and remained so several weeks, yet they have increased to 5, and one left for parts unknown, without even giving warning or saying "good bye," and left at a "2:40 rate," leaving me gazing in the air.

Have extracted no honey as yet, but have about 50 lbs. of comb honey. They have been supplied with empty frames as divisions have occured, but yet they have very little brood.

7. My desire is to keep them strong in numbers. What course is best for me to pursue now to accomplish it?

8. A few days since I changed the empty frames from the sides toward the middle. Will that have a beneficial effect?

9. Will they work in supers when there is room below?

QUIZ.

[1. It is generally believed that they do. My experience and observation say yes.

2. Unquestionably, yes.

3. Depends on age of queen, her condition and character of season for honey. With frost, Sep. 20th. There should be brood on Oct. 15th. I will have brood till Oct., if I have to feed to secure it.

4. Bees will gather pollen without brood, and even without brood or queen. I presume that with a fertile queen and rapid brood rearing they gather far more.

5. I think just as well, and store even more.

6. I desire no openings about the hive, except the entrance, but I want that to be ample.

7. To keep colonies strong, don't increase too fast. Keep vigorous, prolific queen, and feed if the interims of nectar secretion by the flowers are too long.

8. When cold, keep the brood altogether; when warm, it makes little difference, if colonies are strong.

9. They are not apt to.

Adendum—Keep colonies strong.—A. J. COOK.]

Knoxville, Iowa, Aug. 11, 1877.—"This has been one of the most unproductive honey seasons in this section ever known. Bees had to be fed till July 1st; since then they have barely made a living. They may do better from now till frost. Why is it that a queen lays from 1 to 6 eggs in a cell, with plenty of room in the hive? I have such a one, and she is a beauty—a bright yellow Italian—and I am puzzled at her conduct. Should she be superseded?"

A. U. CROSBY.

[Usually, the reason is want of cells or bees. With many, cells; if the bees cannot cover the combs, the queen will put more than one egg in a cell, even though all cells are not used. The queen should not be killed. Give her more bees.—A. J. COOK.]

Lunnville, Tenn.—"I send specimen of two honey plants. No. 1 with pink bloom has been in bloom several weeks and bees frequent it more than any other plant in this section. It grows from 2 to 3 ft. high, with a number of branches. It yields no pollen. The other is not so good for honey, and blooms all summer and fall. What is their value as honey plants?"

M. G. GRIGSBY.

[No. 1 is an aster. There are probably over 100 species in the U. S. All are good honey plants. No. 2 has no leaves to help decide the species; is probably the *Kuhnia eupatorioides*.—A. J. COOK.]

◆

WANTED.—We want the following back numbers of THE AMERICAN BEE JOURNAL: July, 1874; January to July, 1875; and May, 1876. Any one having them to spare, will please notify us by postal card, giving price. Don't send them without first hearing from us, as we want to get them only from one person.

American Bee Journal.

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Two subscribers, sent at the same time	3.50
Three " " " " "	5.00
Six " " " " "	9.00

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Write names and addresses plain—giving County and State.

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☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Remittances to be sent at our risk must be by Post-office Order, Registered Letter, Draft or Express (charges prepaid). Make Post-office Orders and Drafts payable to Thomas G. Newman & Son.

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and is a very valuable work.

Write Plainly.

We have often requested our correspondents to be careful to write their names and addresses plainly. Friend R. B. Oldt asks us to publish the following, which we do cheerfully, it being good advice to all:

> "I would request all who write to me to give the name and address plainly, with County and State. The signatures of several letters I have received were so blind that I could not read them, but tried to imitate them as well as I could, hoping the postmasters could decipher them better than I could. Some years ago I addressed a letter to Mr. Quinby, and received an answer, but my signature was pasted on the envelope, with the following: 'I cannot make out the signature.' This learned me a lesson. Names are not easily deciphered by those who are strangers to the writer."

This "advice is good and timely," and we hope correspondents in general will profit by it. This morning we received a letter with $2 enclosed that had no signature. We often have such with neither signature, post-office, county, nor state. Is it any wonder that vexatious delays follow such negligence?

A little while ago, a person sent for a bee veil, enclosing the money, but giving no address. Of course we could not fill the order, though he said he wanted it by return mail. A week later, he sent us a postal card telling us to send it at once, that he didn't like our method of doing business, etc., but still gave no name—the post-mark on it showed the address, but that did not allow us to fill the order. Another week elapsed, and that brought a letter denouncing us as swindlers and threatening to expose us in the daily papers as such. This time he was *angry*, but fortunately not too angry to give his name, but still gave no address. By putting all three letters together and comparing the writing, we were satisfied that they were all from one person, and filled the order. We wrote him and sent *all* the letters back, explaining the cause of delay, and telling him never to write again without giving full address—and thus *save his temper*.

We have several dollars here now awaiting claimants, which came in letters giving no name or address. Many of such, no doubt, think we are trying to *cheat* them.

Another cause of trouble is not putting a stamp on letters. Such are invariably sent to the "Dead Letter Office" in Washington; the clerk having charge of such, notifies us and tells us to send him a stamp. Here are three letters and an expense of 9 cents incurred—and a vexatious delay of 2 or 3 weeks. Let all be careful, and thus avoid mistakes and vexatious delays.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, OCTOBER, 1877. No. 10.

Editor's Table.

☞ We should use a book as a bee does a flower—draw from its well.

☞ A large portion of the Patent Office, containing models of bee hives, etc., was destroyed on the 24th inst. A defective flue was the cause.

☞The annual product of honey and wax in the United States is at present worth nearly $15,000,000. We export about $700,000 worth of wax and $,1,200,000 worth of honey.

☞ The Southern Kentucky Bee-Keepers hold a Convention on Wednesday, Oct. 3d at Glasgow, Barren Co., Ky. A general invitation is extended. Dr. N. P. Allen is President and H. W. Sanders, Secretary.

☞We learn that Messrs. Thurber & Co., of New York, have a very nice exhibit of honey at the American Institute. Other parties are sending quite a number of apiarian implements as well as honey. We trust that the display will be the best that was ever made on the continent.

☞ Geo. H. Teague, of Wakefield, Mass., has sent us a view of his bee shed, which, to say the least, appears to advantage in the picture. He remarks that "it has many points to recommend it," and that he can take any of his friends inside to "see the bees, etc., without fear of stings," etc.

☞ A letter from C. O. Perrine, who is now "going the rounds" in Europe, informs us that he intends to visit Italy, Egypt and Cyprus Island, and will bring good queens of several varieties with him. He called on friend Abbott, editor of the *British Bee Journal*, and expects to see him again on his return.

☞ J. Oatman & Co., of Dundee, Ill., have sold their entire crop of honey to C. O. Perrine of this city.

☞ Let every bee-keeper do all in his or her power to make a magnificent display of honey and implements for the apiary at the American Institute next month, during the meeting of the National Convention. We have sent on a box of implements and quite a number of others have sent on articles of their manufacture. Let it be the most creditable display ever made on this continent.

☞We are informed by a bee-keeper who was present at the Illinois State Fair at Freeport last month, that only one small lot of honey was exhibited, and that was of a poor quality and in very indifferent shape. We notice that the Concord Bee Hive manufactured by Kraetzer Bros. & Stauber of this city, was exhibited and awarded a premium and diploma. Is it not strange that out of the large number of bee-keepers in this State only one could be found enterprising and energetic enough to have an exhibit of honey there? "Tell it not in Gath; publish it not" at home!

☞Of friend A. B. Cheney, of Sparta, Mich., the Grand Rapids *Post* says:

> Mr. A. B. Cheney has over 100 swarms of bees and is one of the most successful bee-keepers in the State. He has made 5,000 pounds of honey this year, which, owing to its quality and superior manner in which it is put up commands considerably more than the regular market price.

Listen to that, ye who put up good honey in a slovenly manner. You see now that it pays to put it upon the market in an attractive shape. Will friend Cheney tell our readers just how he does it? The *modus operandi* must be good, for the honey "commands considerably more than the market price." That is proof enough!

Beeswax—A Staple Article.

The annual product of beeswax in the U. S., is said to be 20,000,000 ℔s., and it is worth about $5,000,000.

An exchange remarks that the uses for wax are numerous and important. Its property of protecting tissues and preventing mould and mildew was well known to the ancients, who used cerecloth for embalming and wax for encaustic painting, as in the wall pictures of Pompeii. Wax candles and tapers play an important part in the processions and ceremonies of the Roman Catholic Church.

Wax is used by the manufacturers of glazed, ornamental, and wall papers, and all paper collars and cuffs for polishing the surfaces. It is used in varnishes and paints and for the "stuffing" of wood which is to be polished, as for pianos, coach-work, fine furniture, and parquette floors. Electrotypers and plasterers use wax in forming their moulds.

Wax is an important ingredient in preparation for covering the surfaces of polished iron and steel to prevent rust. Combined with tallow, it forms the coating for canvass and cordage to prevent mildew, as in sails, awnings, etc. Artificial flowers consume much wax, and despite the introduction of parafine, seresin, and mineral wax, its use appears to be extending.

The *Scientific American* remarks that the adulteration of beeswax with rosin has led to the invention of a new method for its detection. E. Schmidt recommends the following process for the rapid and accurate detection of relatively small quantities of pine resin: He heats 5 grammes (75 grains) of the wax to be tested in a flask with four or five times the quantity of crude nitric acid, specific gravity 1:31 to 1:33, until it boils; and it is kept boiling a minute, then an equal volume of cold water is added, and enough ammonia (which must be added very cautiously) put in and shaken to cause it to smell strongly of ammonia. The alkaline liquid is decanted from the percipitated wax into a cylindrical vessel. If the wax was pure the liquid will have a yellow color; if the wax was adulterated with resin the liquid will have a more or less intensely reddish-brown color from the formation of nitro-products. This being a colorimetric test, it is well to have some perfectly pure wax for comparison. The reaction is much more violent during boiling, if resin is present. As little as one per cent. can be detected in this way.

Comb Honey Carriers.

Apiarists who have had experience in shipping comb honey, know how essential a good honey carrier is in getting it to market in a good merchantable condition. We now have three honey carriers in our museum.

The best one we have seen so far is the Hoge Carrier. A shipment of comb honey has just been received in it from Thurber & Co., of New York, with perfect safety. None of the combs being injured in any way.

It is 16x25 inches outside and consists of a pine box made of 1 inch lumber with holes for handling on each end. On the top are three strips three inches wide. In this outer case is an inner one resting on hollow rubber balls, with similar balls between it and the sides and ends of the outer box. The inner box is made of half-inch lumber and the balls leave about one inch space all around it. The top being partially open will insure its being kept "right side up." It is evidently a success.

Edwin Pike, of Boscobel, Wis., has also sent us a sample of nice comb honey in his Carrier. It consists of a boz 13½x17½ inches, with a wire handle running from one end to the other. It has a glass top, held in place by an inch frame, and the whole rests upon rubber balls to prevent jarring.

The third is Novice's Carrier which we have before described.

☞ One of the handiest things we know of in the Book line, is "Moore's Artizan's Guide and Everybody's Assistant." See advertisement of it on page 355. It contains information for everybody on every conceivable subject. "There's millions in it!"

Royal Bee Funeral—A Canard.

The following is found in the Lamar (Mo.) *Advocate* af Sept. 13th, 1877, and as it asks our opinion of the matter we give it entire:

On Sept. 1st, I obtained from W. C. Grier in Lamar, an imported Italian Queen which I proposed to introduce into what I considered the best hive I have. On the night of the 2d, I introduced her into the hive leaving her over night and in the morning of the 3d, I found the old Queen, a black one, and taking her out I cut off her head and threw the body some 15 feet from the hive on the ground. I noticed no particular commotion among the bees until about 2 o'clock in the afternoon when I observed a procession of bees forming at the hive in a solid line and moving toward the body of the dead Queen. They moved on and approaching the body surrounded it, and all with one accord, as they approached the body, threw up their wings in a peculiar manner and made every sign of grief and mourning. After a time they withdrew and returned to the hive. No further demonstration took place. Was this the result of instinct or reason? Will Novice or THE AMERICAN BEE JOURNAL answer the question.

T. G. HARVEY.

We are frank to say we can regard this funeral business as only a canard, in which Mr. Harvey adroitly " played it " on the editor of the *Advocate*.

☞As a rule, farmers are now enjoying unmeasured prosperity. An exchange aptly remarks that combining in themselves the interests of both capital and labor, they have, unfortunately, escaped the effects of the recent conflicts which the antagonism of such interests has produced in various parts of the country. They have tilled their fertile acres in peace, and have been blest with an unusully abundant harvest. Their bins are bursting with the golden yield of the grain fields. Plenty sits smiling at their hearths. For the products of their acres there is an active demand. The granaries of the marts of Russia have been exhausted. The war has practically stopped Russian agriculture. The surplus of American grain will find a ready outlet through the channels of exportation. Prices will rule high and farmers will roll in wealth.

Harvest Musings.

Beneath a shade, upon the grass I lay,
In happy thought—for all the scene was bright;
The brook and field and landscape, all were gay,
As beamed upon them Heaven's refulgent light.

I mus'd upon the past—the present fall—
And plucked the blades, within my reach around—
Thinking how Heaven had blessed my labors all—
So plentiously my " bees and honey " crown'd!

Within my reach, I spied a clover flower,
Whose perfume sweet, attracted there a Bee;
With busy hum, and all its "gathering" power,
It then and there "extracted" sweets for me.

I mus'd again—but could not say how long—
A sweet voice came, and calmly said to me:
"Learn from the Bee—send up a joyous song
For bounteous "stores" thy Father sends to thee."

☞ The Queens ordered of D. Tremontani through this office, were sent at first by mail, as he was unaware of the late ruling of the P. M. General, excluding them from the mails. On their arrival at New York, they were refused by the Post office and returned to Italy. Signor Tremontani then shipped them in bulk by express to this office. They came in good order and were at once sent on to their destinations. He will not ship less than eight queens hereafter and then only by express. The prices he names in his advertisement are for them in Italy. The importation fees and express charges make them to cost about $5.00 here. We shall take no more orders for them now till next spring, when orders may be again sent to him through us, if so desired.

☞ We have received Helmick's Centennial Cook Book, containing over 100 valuable receipts for cooking, besides other useful information. Send a three cent postage stamp to the publisher, F. W. HELMICK, 50 West Fourth street, Cincinnati, Ohio, and he will send it to you.

☞ We are in receipt of Vick's Floral Guide, No. 4 for 1877. This is almost an indispensable serial for the florist. The Guide is to be issued monthly next year at $1.25 a year, with the design of making it the "neatest work of the kind in the world." Address James Vick, Rochester, New York.

October Management.

Honey gathering having now ceased, weak colonies should be strengthened by uniting, and all prepared for winter. Colonies should now be strong with young bees and have plenty of stores—say about 30 lbs. If they have not good honey enough, they must be fed. Enough can be given in two or three days to prevent starvation. Coffee A sugar, reduced to the consistency of honey, is best. We cannot advise the use of the poorer grades of sugar for feeding. A VanDeusen feeder will be found useful, if no other is at hand; it can be used on any style of hive, and does not permit waste. as the atmospheric pressure prevents the escape of the feed, except as taken by the bees. Let the central frames contain many empty cells, and see that they have free passages from one comb to another, in order to reach their winter's feed. Use division boards, contract the entrance, and cover well with a quilt.

THAT toads will eat bees, would seem to be clearly proved by the observations of M. Brunet. As the bees of a hive were crowding in to escape from a rain-storm, some of them rested on the grass, in the vicinity, awaiting their turn to enter. M. Brunet saw a toad busy in devouring these bees. He carried the toad again and again to a distance of from thirty to fifty metres from the hive, but sooner or later the animal was at his post again, greedily devouring the bees.

☞ We had a pleasant visit on the 26th ult., from Prof. A. J. Cook, of the State Agricultural College, Lansing, Mich. He was in attendance at the National Agricultural Congress then in session here. He is genial, and very companionable, and of course we spent the hours very pleasantly; only regretting the narrow limits of his stay with us. In company with Prof. Cook we listened to a very able address by Prof. C. V. Riley of St. Louis, on the Rocky Mountain Locust, made before the Congress.

How to go to the Convention.

"What route will you take to the National Convention?" is a question we have answered by letter many times, and as several such questions are on our desk, let us say to all delegates from the Northwest and others who intend to go to the Convention that we shall take the Lake Shore route to Buffalo, thence to New York over the New York Central. Tickets by these lines cost no more than by others; and then we have the felicity of avoiding all changes of cars, ferries and transfers, as the coaches leaving Chicago over the Lake Shore line run through to New York. These roads are splendidly equipped and the tracks on this great through line, are the finest in the country, being constructed smoothly of steel rails. The 5:15 P. M. train from Chicago, runs to New York in 37½ hours, arriving in the latter city at 6:45 A. M. This route is pleasant and very attractive, giving an opportunity for a visit to the magnificent Niagara Falls, (which all should see) and affords ample provision for comfort in the line of drawing-room and palace sleeping coaches, etc. So we say to all, take the Lake Shore and New York Central Railways to the Convention.

☞ Dr. W. B. Rush of New Orleans, La., wants a partner. He intends to enlarge his operations next season, and calculates on five apiaries in different parts of the country; three of 75 colonies each; one of 65, and one of 200. Any one desiring, can communicate with him as above.

☞ The honey crop is rather short in various places this year. A few months since it appeared to promise much larger returns, but the drouth of midsummer blasted many a "*good hope.*" Prices will no doubt soon have a decided upward tendency. To all, we say: "Hold on a little."

IT is a remarkable fact that if a colony is queenless, drones are allowed to live through the winter, being unmolested by the workers in the fall.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

N. N. H.

Do you know what that stands for? I guess not. Then let me tell you. Novice—National—Heddon. I notice with regret that Novice makes no mention of the National Convention. Is he opposed to it? One would judge so by his silence. If so, then he and friend Heddon have once agreed, for friend Heddon frankly expresses himself as "so opposed," in the March number, and states his reasons therefor. Among others he says: "Such conventions, no doubt, are beneficial to supply dealers, and I do not blame that fraternity for trying to blow the breath of life into them."

As Novice is a "supply dealer," probably the above extract may somewhat explain his silence. W. J. A.

PURE QUEENS.

Chattanooga, Sept. 12, 1877.—"I don't remember whether I told you before or not that of the 3 queens raised from the brood sent me, 2 are purely mated with drones from the first queen you sent me. That is the best luck I have had with queens this year." S. C. DODGE.

[The queens alluded to were reared from brood of my brown imported queen. Glad to hear of your good luck, friend Dodge.—W. J. A.]

BEST HIVE.

Hurricane Mills, Tenn., Sept. 13, 1877.—"What kind of hives do you use in your apiary? If more than one kind, which do you think best?" W. H. MEADOW.

[We have used the Langstroth, American, Triumph, Standard, and Thomas hives. We decidedly prefer the Langstroth, and have changed nearly all of ours into that shape, and next season we hope to have no other kind in our apiaries.—W. J. A.]

DRONES WITH RED HEADS.

We have a colony that produces drones with heads as red as a cherry; the color is bright and vivid, and they look as if they were out for a general training or masquerade. Do you have any such at your house? —*Gleanings.*

[Yes, a dozen or more, and did not regard them as uncommon. We sent a queen, as a present, last year, to Miss Anna Saunders, that produced such drones, but she unfortunately lost it in introducing.—W. J. A.]

PRICE OF BEES.

"I expect to move to Nashville, this fall, and would like to know what bees can be bought for in Tenn.; in movable comb and common hives. How much will a swarm generally store in a season?"

G. W. CHURCH.

[Black bees in common box hives can be bought from $2 to $3. Those in movable-frame hives, at from $5 to $10. Nearly all bees in movable-frame hives are Italians. The average yield of honey is about 50 lbs. Honey is worth from 8c. to 15c. per pound. Should you visit Nashville, I hope you will give us a call. We are but 45 miles south of Nashville, and only 2 hours ride.—W. J. A.]

FRIEND ANDREWS:—I have just treated myself with a trip to Rome, Ga., to see that veteran apiarist, Mr. A. F. Moon, well known to many of the readers of THE AMERICAN BEE JOURNAL, as the editor of the *Bee World*.

I found him with very poor health. He is confined to his room a great deal of the time on account of lameness and general poor health. He gets about with difficulty, using a crutch and cane. But he says he is improving slowly.

He kindly showed me through his apiary, which I will try to describe to you. The hives are arranged on benches about two feet high in four parallel rows about 30 feet long each. The hives set about four feet apart, with small nuclei hives between some of them. His hives are nicely painted and have a neat appearance. He uses a frame about 8x12. He advocates a shallow hive for box honey. Thinks six inches in depth is sufficient. His strain of Italians are very handsome and bright, both home breds and imported. I saw quite a variety. He has a name for each of his queens. His favorite he calls Goldmine; others are Gold-drop, Goldmaid, Jenny Lind, Favorite, etc., etc. From Goldmine he raises those handsome, light yellow queens.

He has not been able to fill orders this season on account of his health.

I took Jenny Lind home with me and anticipate raising some nice queens from her.

I was very much amused to see him pick up the workers with his fingers and put them into the cage, just about as I would corn. He catches them by both wings, they are then unable to turn over and sting his fingers.

The honey yield here was splendid up to July 1st, then suddenly gave out. I have fed a little to stimulate breeding. Honey is now coming in rapidly. We have had a fine grain and fruit season. S. C. DODGE.

Chattanooga, Tenn., Sept. 3, 1877.

Bee Culture for the South.

Indications are constantly being presented to the observation that the South is gradually taking a "new departure" in the direction of diversifying her industrial pursuits. All things favor this tendency. The invisible course of events—the full inauguration of the beneficient system of free labor—the intense and universal individuality which it creates—the keen desire for personal competence and the consequent competition—conduce to generate activity in every pursuit that promises reward. The few possessed of many acres steadily driving an ignorant labor to the production of one great staple, must to a very great extent, give place to the individual on a few acres striving in every way that intelligence can dictate to better his condition. The final result can but be happy, for no country can be highly prosperous when devoted too eagerly to one pursuit, which like Aaron's rod, swallows up all the rest. Among the industries which will tend to give diversity and profit at the same time, is bee-culture. The profusion and long continuance of bloom and the geniality of climate being in accord with the nature of the bee and favoring out-door wintering; the comparatively light labor required and the intellectuality and poetic beauty of the pursuit (it having been called "the poetry of moral life,") should draw general and intelligent attention to it in this section. The use of the movable frame hive, the ease of artificial propagation and the extractor as a harvesting machine, give system to the pursuit and place it beyond hazard and their advantages are such as to dissipate the densest ignorance and prejudice in favor of ancestral ways. Let me picture a scene which could be easily realized by vast multitudes of farmers in the South. Let me place an active and intelligent farmer on 80 acres, a quantity of land easily acquired here. If he is near a shipping point he can devote a portion of his farm to fruit, strawberries, peaches, etc., and realize largely by early shipment north. He cultivates enough ground in corn, wheat, oats, rye, millet, sweet and Irish potatoes, vegetables, etc., for use on his farm and limited sale, if he is invited by large profit to sell; he has fine stock, houses, mules, cows, hogs, sheep and goats, etc., because he can easily take care of them and does take care of them; he has proper pasture and buildings for his stock and crops and a comfortable cottage, though it need not be air-tight, as our winters are mild and not a great deal of fuel required. In addition to these things, he has a few acres well fertilized and cultivated which make him a bale of cotton per acre, with from 45 to 50 dollars per bale and last but not least, a humming and busy apiary of 50, 100 or 200 hives with movable frames and the attendant extractor, that yield from 5 to 10 dollars per hive. Such a man would certainly enjoy the "glorious privilege of being independent" and when such things are possible, and we are still dependant, having our smoke house and granary in the West and clothing establishment in the East, we must see that "it is not in our *stars*, but in *ourselves* that we are underlings."

OSCAR F. BLEDSOE.

Grenada, Miss., Sept. 13, 1877.

[The above is written to compete for the queen offered in September number. The writer in a private note says: "I hope you meant a *pure tested*. He further adds, "I desire such a queen in a '*Nucleus Hive*' and will pay the difference if I am so fortunate as to be awarded the queen." Well, Sir, as a greater inducement, we will amend our proposition and agree to make a present for the best written article for this department, any time from the present until and including the April number, a nucleus colony of Italian bees, with a pure tested queen bred from one of our imported mothers.

"What is your price for a highly colored, pure tested queen in a nucleus hive with Langstroth frame?"

We will furnish such with 3 frames for five dollars.

"I would have written at greater length, as I desired to say something as to proper hive for the South, but thought my article had reached a proper length. I claim the privilege, if necessary, of writing further as a continuation of said article."

Certainly, you and all others are entitled to that privilege, and we hope to have at least one article for each month.—W. J. A.]

For the American Bee Journal.

A New Use for Honey.

I have used honey this year to make my wines and preserves, am greatly delighted with the result. I think honey is much better for those purposes than sugar; in preserving fruit there is a great deal of labor saved, as you do not have to make and clarify syrup; a pound of honey will also go about one-third farther than a pound of sugar. Preserves made with the darkest honey I have, are fully equal to those made with the best quality of brown sugar, and I must say that I am delighted to think that so much use can be made of honey at home.

MRS. M. DUNBAR.

Washington, La., Sept. 8, 1877.

For the American Bee Journal.

Dollar Queens.

DEAR SIR:—I see a great controversy in your JOURNAL in regard to dollar queens. If we had to make our calculations as Mr. Dadant, I have no doubt that it would be a loss to raise such queens; but I must differ in this.

Since I have imported queens from Italy, I have been experimenting on queen raising, not only because my intention was to enter the field and sell dollar and tested queens for sale, but also for the purpose of Italianizing all the bees around here, and I must say that my experience is entirely different from Mr. Dadant's, and that there is money in the dollar queen business, if one can sell all he can raise. Therefore, I am determined to sell dollar and tested queens next season from imported mothers and I have no doubt that after deducting the loss and paying advertisements that the profit will be satisfactory.

In raising queens by the nuclei system as given in *Gleanings*, I see more profit than if the colonies used for the purpose were kept for surplus honey. With five colonies, or rather part of colonies, I can raise an average of five dollar queens a day and if I have sale for them I think I would be making more than if I ran these colonies for honey.

Now since I have been keeping bees I never had any colony to give me more than 8 to $10 as an average. Having no sale for box honey I use only the extractor. As I use five colonies for my queen cells and 50 two-frame nuclei, which is also equivalent to five colonies, I consider that the amount of honey which would be obtained from them would amount to 80 or $100. Now if I can sell five queens a day at $1 from April 1st to 1st of October, (I speak for this latitude as I can have laying queens as soon as the 10th day of March,) I think this would make me an amount of $915 without counting the sale of tested ones. I don't consider these 10 colonies as a loss, but as capital which has really paid more than the balance. The frames of brood given to the colonies used for queens, for the purpose of keeping them up, could be calculated as an expense, but I don't consider it so and the colonies furnishing them can really spare them, without inconvenience. I consider my loss this year of several hundred dollars for not having raised queens for the market, as the season was poor and out of 85 colonies, I have extracted only three barrels of honey, which netted me $105. I sold 15 colonies for $112.50, total, $217.50.

Now I wish it perfectly understood that I have not written the above to enter in any controversy, but only merely to speak of my experience in queen raising.

PAUL L. VIALLON

Bayou Goula, La.

Our Letter Box.

Palestine, O., Aug. 31, 1877.—"I extracted about 4,000 lbs. of clover honey this season, and expect to sell it in quart jars."

S. S. FETHEROLF.

Riley Co., Kan., Sept. 1, 1877.—"I commenced with one colony of Italians in June. I divided them and now have 50 to 60 lbs. of beautiful honey, and the bees are still working with all their might. I am in love with the little workers."

MRS. CARRIE B. HESTON.

Waveland, Ind., Sept. 19, 1877.—"Bees are gathering some honey now, enough to keep them breeding. Some hives are gaining a little in honey. I believe bees will be in good condition for wintering. The later swarms managed in the old way will not get enough honey to winter."

ISAAC SHARP.

Montgomery Co., Tex., Sept. 10, 1877.—"In March, 1876, I commenced bee-keeping. I have now 145 colonies. I use the Tennessee hive with some improvements. I have an excellent range of willow, huckleberry, elder, prickly ash, linn in large forests, grape, etc. Summer pasturage is not so good."

THOS. D. LEONARD.

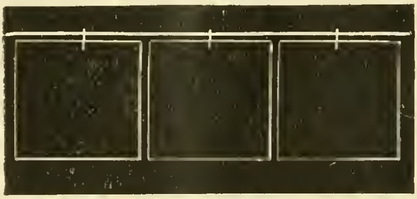
East St. Louis, Ill., Sept. 1, 1877.—"My honey harvest this fall promises to be bountiful. From 30 hives this spring I increased by artificial and natural swarms, to 60, and have already extracted 40 gallons. The new stock law has caused the blooming of many flowers here, that I did not notice before; but our dependence in the fall is chiefly smartweed."

CORA MCCROCKEN.

Platte City, Mo., Sept. 6, 1877.—"The season has been a short one here in N. W. Mo. The early part of the season being too cold and wet, while the last of July was quite dry. A couple of good rains a short time since will, however, revive the bloom, so that our little pets may do something a while longer. Much success to your JOURNAL, and long may it live."

THOS. MORAN.

Warren Co., Ill., Aug. 27, 1877.—"I think the successful introduction of virgin queens very difficult. I have given it a thorough test this summer; and find it a perfect failure, at least it is so with me. My bees have done well, and are gathering finely from buckwheat now. I am selling my honey at home. Have already sold 3,000 lbs. I wholesale at 16c. and retail at 20c. per lb. I use a small surplus frame, 6 of which fit into a Quinby frame. I made frames on purpose to hold them. Bees are so long filling the side boxes of a Quinby hive that I have discarded them, and take 3 of the small frames and lay on a strip on the top and fasten with wrought nails, one nail to each section. The stick projects a little at each end, so as to be easily carried. These frames are just of the right height to be put on the top of Quinby frames; two sets making 6 little frames just the size of one of the large frames. The bottom of each little frame is 7-16 of an inch square, set in, one edge down, to make it easy of access for the bees, and not to kill them when placing it in the hive. The frames are like this:



These frames please the grocery men much better than the glass boxes. Each frame holds from 1 to 1½ lbs."

L. C. AXTELL.

Birmingham, O., Sept. 24, 1877.—"H. Alley takes pride in quoting from the letters of those who received queens from him and are suited. I received one from him that had been a month on the road, for ought I know, as it was directed to N. Y. instead of Ohio. It came round two months after the time of ordering, with the accompanying bees dead, and the queen nearly so. And that is not all. Of the two ordered May 4th, the one above mentioned was the only one we received at all. The probability is that the other one was mailed in the same careless manner, if at all, and went scouring around the country until it was thrown out of the mail. Should those who order of him be the losers, when it is caused by his carelessness? I have written him twice concerning the lacking queen, but he neither sends it nor will he answer me. We have ordered queens from J. Oatman & Co., and the queens arrived promptly in the best possible condition."

C. A. GRAVES.

[Friend Alley will doubtless adjust this matter to the writer's satisfaction.—ED.]

Antrim, Minn., Sept. 2d, 1877.—"The September number of JOURNAL is received, filled with interesting articles from nearly all the States. Why do we not see reports from Florida, the land of flowers? Are there no *live* bee-keepers in that State? The fine dry weather here the past two months has been very favorable for bees in this part of the State, and though we have but little increase in swarms, considerable surplus honey has been gathered, of excellent quality. L. M. LINDLEY.

[There are several energetic bee-keepers in Florida, but there is room for many more. —ED.]

Brunswick, Germany, Aug. 20th, 1877.—"We have had in Germany up to this time a very poor season. I have fed from spring till now more than 1000 pounds of honey. On the 8th of August the most of my Blacks had scarce a single cell of honey. I removed on this day my colonies twenty miles from here to the heath, where buckwheat and the Erica vulgaris are now in full blossom. As the weather since that day was not very favorable I fear my bees are to day as hungry as on the 8th of August, and so it is possible that I may have some nests of mice in my stocks instead of honey, when I shall remove them homeward."

C. J. H. GRAVENHORST.

Madison, Ind., Sept. 7, 1877.—"I find by reading the JOURNAL that the honey harvest has not been first-class this year. The honey harvest in this locality has been about half a crop. I have 21 colonies of Italians all in good condition. I use the Faulkner bee-house, and I like it very much, but I think his out-door hive is better for the extractor; the house is very handy for box honey, and good for wintering bees. I can sell extracted honey here for a better price than for box honey. I get 25c. per ℔. for extracted, and 20c. for comb honey. So if extracted honey don't pay best, I would like to know? I can get more of the extracted than of the comb. I use the 6-℔ and 3-℔ glass boxes, and they are nicer." HENRY C. WHITE.

Lawrence, Ill., Sept. 10, 1877.—"Mr. C. Hotchkiss, in the Sept. number, page 313, asks—where my bees are, by the side of Mr. Palmer's? I did not intend to brag over my bees. My experience has been that when bees have the swarming fever, as mine had it this year, that they lay up but very little surplus honey. I imagine there is some difference between July 9th—the date of my letter—and Aug. 8th—the date of his visit. That month is the one in which Mr. Palmer got 4,000 ℔s. of honey, and I got only 100. Up to Aug. 1st I got 1,000 ℔s. of white clover honey, and for the next 3 weeks I only got about 150 lbs., for the reason that we had no rain from July 1st to Aug. 10th, the consequence was that everything suffered—my bees included. Since Aug. 10th they have done very well, but I shall only get 1800 lbs. in all, this year, and 1500 lbs. of that will be from my new swarms, as my old ones did but little besides swarming, and 5 of them swarmed out entirely, and I have just "brimstoned" them; the rest have plenty of bees and will winter all right." J. LEE ANDERSON.

Marshall, Ill., Sept. 12, 1877.—"My bees are doing finely, storing honey faster now than at any time during the season."

N. B. DEVOL.

Hopkinsville, Ky., Aug. 28, 1877.—"Enclosed is a specimen of the greatest honey-producing plant in this part of the State. It never fails to yield a fall supply, but is very strong and not altogether salable. For the benefit of the honey-producing interest, I wish you to tell me what it is, as I can find no one here that knows anything about it. My crop this year will reach 1,000 ℔s. comb honey in sections."

R. M. ANDERSON.

[It is *Eupatorium Serotinum*. It has no special common name, but is one of the 25 bone-sets or thorough-worts which are found east of the Mississippi. The bone-sets are all bee plants.—W. J. B.]

Cincinnati, O., Sept. 8, 1877.—"I have had a hard time with my bees since the honey season ended, owing principally to carelessness on my part. When the honey season was about over I had seven good nuclei; but one evening after looking at one of them I left some honey on the hive and forgot it; next day I looked at my hives I found all my young hives being robbed. I immediately stuffed a lot of new hay in front of the hives, but this not answering, I took some gum camphor and put around the entrances but that did not stop it. I then went through them taking away all the frames, the bees could not cover thick and closed up the entrances so that only one or two bees could enter at a time. Finally, I stopped the robbing, but they tore down several of my queen cells, and in several hives the queens were lost when they went out to meet the drones, so now I have my seven old hives and five young ones which are doing very well. I took nearly 300 ℔s slung honey this year." N. T. HORTON.

Pike Co., Ky., Aug. 30, 1877.—"Being a reader of the AMERICAN BEE JOURNAL, and seeing nothing from this part of the State in your valuable paper, I will send a few items. Bees nearly all died last winter, what few remained have done well this summer, both in swarming and making honey. Early flowers are plenty here. The first are peach and apple blossoms, then the black locust (a very rich bloom). Our main blooms are poplar and linn, from these bees store honey very fast. We have but little white clover, but think it excellent for bees. Have tried alsike clover; bees work on it very well, but we want some kind of bloom that will come in about July 15th and continue until Aug. 15th—this being the time our bees are idle. I have tried buckwheat, but it does not seem to do much good. Bees work on it early in the morning, but as soon as the sun gets up they quit it. I shall try melilot. I have had colonies make 80 lbs. of box honey, mostly from poplar and linn, this summer." JULIUS C. WILLIAMSON.

☞The Jersey county, Ill., Agricultural Society will hold their tenth annual Fair, Oct. 9th to 12th, 1877.

Correspondence.

For the American Bee Journal.

Bees of the Same Colony Fighting.

As there has been considerable discussion in the JOURNAL on the above subject, I have concluded to give my experience.

I am of the opinion that bees of the same colony never fight, though I have had many stung and killed by bees of the same colony. Two years ago last spring, I lost my breeding queen about May 15th, and the colony proceeded to rear a lot of queens. I made nucleuses enough to hatch 7 of them, but being too early in the season, only 2 of them ever became fertile. One of them commenced laying at about 10 days old, and the other at about 18 days; the remainder were all killed by their own colonies. The first trouble I discovered among them was when I opened a hive and found a knot of workers clustered together; I supposed the queen was in trouble, but when I examined the cluster I found no queen in it; upon further examination I found her in another cluster near by. The two clusters had evidently been all one but had separated in some way, and all were trying to destroy the queen. Those on the outside of the cluster were stinging other workers while trying to get at the queen. I had 5 queens destroyed in this way, after which it was almost impossible to have them hatch a queen and retain her until old enough to become fertile.

Last year I had occasion to cage a number of fertile queens, and I put several of them in a hive that had a laying queen; in a short time I saw quite a number of dead bees on the alighting board. On examination, I found the cages containing the strange queens were matted in a cluster of hostile workers, and perhaps 2,000 or 3,000 dead ones in and about the hive, and as honey was plenty and no pilfering going on, it is certain that those hostile workers on the outside of the cluster stung the others while attempting to sting the queens in the centre of the cluster. The queens did not sting the workers, for they were caged and could not get at them, were they so disposed. I terminated the trouble by taking the caged queens away.

This year I had a natural swarm; the queen having her wing clipped I let them return to their old location, after removing the old hive and putting an empty one in place of it. About 3 hours after that I saw a bunch of workers in front of the hive, and on stirring them up to drive them into the hive, I discovered they had clustered on a strange queen that had united with them while swarming. The queen and about 75 workers were stung to death. The workers were stung by workers on the outside of the cluster while trying to reach the queen with their stings—and not by fighting. I suppose it was a virgin queen out on her bridal trip, that united with the swarm while on the wing. If another swarm had united with them while on the wing, the workers united peaceably, or more would have fought than in that one small cluster.

Last year there was so much said about shade, ventilation, etc., to prevent swarming, that I have experimented considerable with it this year, and my opinion is that neither shade nor sun; neither top, bottom, nor side ventilation, nor any or all of them combined, will prevent, retard, or in any way affect, swarming. They will swarm in spite of all.

S. K. MARSH.

Polo, Mich.

For the American Bee Journal.

Changing the Larvae in Queen Cells.

Having read in some of the bee papers of removing larvæ from newly-formed queen cells, and putting in their places larvæ from another hive, I have been trying it. I have a stock, the queen of which produced a low grade of what are incorrectly called hybrid bees—there are no hybrid bees. Desiring to raise a better queen for them, I cut out a piece of comb and fitted into the place a piece taken from another hive, placing it in such a position that the cells on one side opened downward. I supposed that the bees would take advantage of this favorable position, and build queen cells upon it; but they did not. Several queen cells were started on other combs, and with a flat-pointed stick I removed the larvæ from them, and put other larvæ from my best stocks in their places.

In one case I put a larva into a rudimentary cell, such as are frequently found on the edges of combs. The cell contained neither egg, larva, or food. In all these cases, five in number, the operation was successful. The bees at once began to feed the grub I had put into the rudimentary cell, and the next day I found the cell considerably lengthened out, and the young grub lying in a bed of royal jelly.

None of the young queens have hatched yet, as the operation was performed only a few days ago; but I regard the success of the experiment as beyond question.

The only difficult thing in the operation is the removal of the worker larva from its native cell without injuring it. To do it successfully requires careful and delicate manipulation. It can be most easily done by cutting out a small piece of comb containing the larvæ to be transferred, when one side of the cell can be cut away, and the young grub lifted out with perfect ease and safety.

Many cases will occur in which those who raise queens can in this way utilize cells containing larvæ of black or mixed bees, and raise pure queens from them. If I had known how easily larvæ could be transferred to queen cells from which the larvæ had been removed, I could have saved valuable time in queen rearing.

M. MAHIN.

Logansport, Ind., Sept. 6, 1877.

For the American Bee Journal.

Straws.

MR. EDITOR:—If we could all depend upon each other's honesty, we could write a valuable article in fewer words, as our assertions would need no "reason why" to prove their truth. I think each one can get the experience of the other in an incomparibly short space. Something in this way:

COMB FOUNDATION.

Have had two years' experience with all kinds; about 50 lbs. in all. The pure yellow wax is the best. I have proven that its successful use is possible. Time only can prove to my satisfaction that it is a matter of economy.

I find small boxes of two combs (say 4 lbs. gross) are demanded with the small frames. I find the 4¼x4¼ sections are too small to suit the market. I think 4¼x5⅝ will be the smallest size used. I find Root's method of putting these frames within frames very complicated and troublesome, compared to the method I use. Frames whose sides touch each other should be moved sidewise, and not lifted up. I have used sections for 3 years and also glass-side cases for shipping them, the same length of time. I suppose Root borrowed the half-worn-out idea of Henry Palmer.

I find the Bingham smoker all that is required. It is worth twice its cost to blow the fire with of a morning.

The best bees I ever owned I now have, and they are the bees described by Ch. Dadant, as the dark, pure Italians.

Our present fall harvest is going to prove very light, as the nights are too cool for comb building.

Now, Mr. Editor, as I am only an "old-fashioned, box-hive, brimstone, bee owner," I feel it the duty of some of the more learned artists to answer the following

QUESTIONS.

In what way is the coming National Convention going to benefit the producers of surplus honey? I am one of them, and it will cost me $50 to attend. Is that the best way to get $50 worth of bee-wisdom?

Why are men who do not produce surplus honey for their income, the movers of the meeting?

Why do we hear nothing from our best and ablest honey producers, who make producing strictly a specialty?

Where is Henry Palmer and his 250 colonies? He is one of the ablest apiarists in the country. Why doesn't he help to advance the "glorious cause?"

Why do the foreign papers quote Adam Grimm as having left $100,000? Is it true? If not, why falsify? Can't our pet pursuit be sustained by truth?

The *American Grocer* does me a great injustice, and so do others, by stating that I "attempted to stay the production of honey" by certain true statements.

Does the *Grocer* think that any man of "no inconsiderable practical experience" would for a moment dream of such a wild scheme? Counteract a hurricane with a bee smoker; stop the plague with fastings and prayer!

Didn't some apiarian supply dealer write the article referred to in the *American Grocer?*

Well, what did I try to do? Just this: I tried to point out the future of bee-keeping, as it seemed to me, and show up the tricks and dishonesty of certain sharpers who made their living out of speculation among honest producers. These men all cry: "glorious business, chock full of money, just right for women and invalids." In the name of common sense, why don't these men go at strict honey producing? If they can't make it pay now, they can bunt their brains half out against a sponge, and catch a few colds, till they become invalids, and then make a fortune.

I would say that our fraternity has been worse bled by dishonest and ignorant men, than almost any other, and now let us get rid of them by letting them alone.

Please remember that I take no exceptions to useful supply vending, vended over the counter of truth and honesty. I do not believe that useful supplies need to *manufacture* customers through falsehood, to find buyers. Old apiarists buy useful supplies; but for the useless ones, new bee-keepers must be found.

SURPLUS HONEY.

Messrs. Thurber & Co. are quoted solid as rocks, and we hope they will assist the producers of this country to dispose of their surplus honey, but we hardly think it necessary for us to meet them personally at a cost of $50 each, more or less.

Local conventions are what we now need.

I have been jaring honey for 4 years, and I thought that the reason why the system of putting up honey was dying, was because the contents were getting too cheap for the glass, packing boxes, freight, etc. I now predict that the jaring of honey must dry up, unless foreign countries will take it at remunerative prices. I may be wrong, however.

PREDICTIONS.

Before I close I wish to recall your attention to many of my former predictions. Fully believing myself to be right, I was always ready to stake my sincerity on the fulfillment of prediction. and now when they are coming to be verified to the very letter, isn't it rather provoking to have the results attributed to other than the right cause?

For instance, I said the price of bees must go down to one-half, on account of the low-priced honey and increased production. "Oh, no! oh, no!" was the cry all around. Now here we are; Root comes to the rescue and says: "Bees will be sold cheap to get rid of the natural combs, so foundation can be substituted."

Why don't Albert Potter melt up his poor combs and make a lot of foundation of the wax, and take a new and more artificial start? That would be better than to sell at $5 per colony.

Mr. Grimm's $20,000 or $30,000 came in part from bees at $15 per colony. The question is, can we go to Heaven and pay Jacob a visit, with a 10-foot ladder? If the Grimms should be getting tired of seeing their names in print, isn't there anybody else we can quote that has made something substantial out of apiculture?

Now, Mr. Editor, if you will excuse this long article on a vexed subject, and one that hardly pays to agitate, as every one does as he pleases after all, I will forgive myself for wasted time, and in future hope I shall have no occasion to write other than short articles of experience, that may be of more interest, if not of more worth, to all.

JAMES HEDDON.

Dowagiac, Mich., Sept. 6, 1877.

[Many of friend Heddon's remarks are doubtless true. still *some* of them, we can't help thinking, are calculated to mislead those of limited experience. What he says about the cost of attending the Convention is true, and another year this can be remedied by holding it at a more central place, where it could be more easily and cheaply reached by the majority of bee-keepers. We tried hard to get it located at Cleveland, Cincinnati, Pittsburg or Chicago, but were outvoted. If Western bee-keepers will attend they can vote to have it in the future more centrally located.—Ed.]

* * *

For the American Bee Journal.

Notes by the Way.

Did you ever ponder over the fact, dear old Bee Journal, how very few of the great mass of those who are engaged in any given calling, are really successful? Now and then some cool, clear-headed, far-sighted, sagacious individual will loom up on the business horizon, whose achievements make him the object of wonder and respect of an admiring populace—for we Americans, as a people, certainly entertain a profound respect for the genius and tact that commands success, and justly so too, since it's the measure of a man's ability; yet the great mass of humanity move slowly along the pathway of business, apparently content with the meagre success that attends their efforts in life.

Sullivan and Alexander among farmers, Stewart and Clafflin among merchants, Vanderbilt and Scott in railroading, Ames and Ward in manufacturers, Stephenson and Morse among inventors, Tyndal and Agaziz in science, are examples of those who broke over the narrow confines of a local reputation, and whose names are emblazoned high on the scroll of fame. Bee-culture as a pursuit, is no exception to the rule.

Turning to "Novice's Medley" which hangs upon the wall before us, we notice a constellation of apistical stars—Harbison, (who isn't there after all) Hetherington and Grimm—the magnitude of whose honey crops gained them a National reputation and proved beyond question their ability to successfully manage large apiaries, each numbering more than a thousand colonies. Just below we have Langstroth and Quinby, whose teachings at an early period, sent a gleam of light athwart the almost universal darkness that enveloped the field of modern apiculture; the classical production of the former strongly contrasting with the plain, practical teachings of the latter. The practical results attained by these two luminaries, is evidence that they belonged to two distinct classes—the one, theoretical, the other, practical. Mr. Quinby's apiary reached hundreds of colonies, with a product of tons of honey annually, and this too, notwithstanding he had to contend against that fell malady of the apiary—foul brood.

Well, well, Mr. Editor, when we sat down to "sling a little ink" for the old American Bee Journal, we hadn't the faintest idea of scribbling a homily on finance, nor any of its kindred topics, but we did have a faint idea of telling you something of a pleasant little trip, which recently took us over a portion of your own "Sucker State."

On a pleasant July evening we took passage on the staunch steamer, Riverside, which plies between the Haven of "peaches and plenty" and the metropolis of the West. The night was calm and beautiful, the silvery light of the moon illumining the limpid waters of old Michigan, and as we sat upon the boat's prow gazing out into the great Unknown, fancy carried us away to the time when life's fitful voyage should be ended, and

> "We over the waves of eternity float,
> And then for a life divine."

The following day found us traversing the busy streets of that marvelous city of the West—Chicago. For the benefit of those of our readers who have never beheld this city of wonderful growth, indomitable energy, matchless pluck and great business resources—this city that arose Phœnix like, from her ashes, and now proudly stands beside the fairest inland sea on any continent, as the finest business city of the world—we would like to delineate something of what we saw; but both time and space forbids. We of course "took in" the office of The American Bee Journal and spent a very pleasant hour with the genial editor of this Journal. Although we found him very busy in getting the July number ready for the mails, (it already having been delayed several days by the famous R. R. "strike") he kindly showed us through his "museum" of articles pertaining to the apiary. Here, for the first time, we saw the astounding inventions of many a brilliant genius, while we noticed several articles of real merit. We were pleased to learn that the Bingham Smoker had taken the lead of all others, in extent of sales, orders for it coming from nearly every State and territory in the Union. We have tried nearly everything in the line of smokers, from a Meershaum to a Bingnam, and a twenty dollar note wouldn't tempt us to part with ours if we couldn't procure another. Here were extractors of every shape and pattern, from the frail and fragile "Novice" to the staunch and staid Murphy; hives of simple form, and hives of labyrinthian complications; section frames and honey boxes, jars for extracted honey, comb-foundation to allure the bees "up stairs;" veils to protect one's nose from the "business end" of a bee, honey knives, queen's cages, and countless other things to deplete the over-burdened pockets of the agile apiculturist.

Bidding Bro. Newman adieu, we wended our way to the passenger depot of C. & N. W. R. R., and were soon gliding along their smooth, steel track over the level prairie toward the setting sun. Presently our coach is detached and takes a more northward course, whirling along the beautiful Fox River Valley, when the conductor announces, in clarion tones, our destination—Dundee. A few minutes walk brought us to the residence of Mr. E. J. Oatman, with whom we spent 2 or 3 days very pleasantly, indeed.

And now, Mr. Editor, we find ourselves in a quandary—there is so much we would like to say, that our pencil doesn't know where to begin, nor where to end. We have often heard bee-keeping alluded to as "small potatoes," fit only for those who had neither talent nor business capacity for anything else; but here, at least, is one whose life is a daily refutation of such sneering accusations.

We very much regret that we haven't data to give our readers a correct pen portrait of Mr. O.; for in its absence it would be altogether "guess work." Not far from 35 years of age, about 6 ft. in height, form spare, weighing about 150 lbs., light complexion, blue eyes, and a frank, genial countenance, with a physiognomy that denotes an active temperament and great energy and business capacity—we make you acquainted with our friend, Mr. E. J. Oatman. A few years ago he was engaged in mercantile business in Dundee. Ill-health compelled him to leave the store; bees were chosen as combining recreation, amusement and profit, as also giving exercise in the open air. The result has been not only restored health, but a large and lucrative business. From 150 stocks of bees on June 1, 1877, he has secured a surplus of several tons of choice box-honey, sold several hundred dollars' worth of queens, and increased his stock to 300 swarms. When the reader is informed that this result was all secured from a 21 day's yield from white clover, he will readily understand only tact, energy, and a thorough knowledge of the business could accomplish it.

Mr. Oatman has a decided preference for the Italian bee, uses the "Modest" hive and admires the Bingham smoker. We were more than pleased with the admirable arrangement of his apiary, and with the system and care which were apparent on every hand. We saw something over 75 queens on one afternoon, and nowhere have we seen a finer line of Italian brood. Mr. O's method of queen rearing exactly agrees with our own ideas of the subject; viz:—that of producing a class of bees that are at once pure, peaceable, hardy, and have the honey-storing qualities most fully developed—in short, a bee that is "lightning for business," as brother Heddon would say.

Mr. O's success in the apiary most clearly shows how well he has succeeded. As you may have already surmised, dear reader, Mr. E. J. Oatman is the "presiding genius" of the well known firm of J. Oatman & Sons—his brother Frank constituting the other member of the firm.

In addition to the apiary, they transact a mercantile business (drugs and groceries) of $25,000 per year; own a fine farm of something over 250 acres, and have recently erected a fine "creamery" which converts the milk of nearly 400 cows into butter and cheese. Added to this is the manufacture of articles used in the apiary. Their sales on hives and honey-boxes being already large, and increasing each year. We would like to tell you all of the many labor-saving devices and methods we saw here in use; but we are sure that it will be far more satisfactory for you to do as we did—go to Dundee and spend a few days with the genial, whole-souled and capital good people—the Oatmans. HERBERT A. BURCH.

South Haven, Mich., Sept. 24, 1877.

For the American Bee Journal.

Michigan State Fair.

The Michigan State Fair closed yesterday. The interests of the bee-keepers of the State were very well represented. I received the first prize on the "Product and quality of honey," and the diploma for the "best management and method of securing honey." Many bee-keepers were present and all seemed to take a deep interest in the subject. I had the pleasure of meeting Prof. Cook of the State Agricultural College, also Brothers Townly and Butler of Jackson. H. D. Cutting, Clinton, Mich., had on exhibition a bee-hive, which possessed considerable merit and drew the first prize. The difficulty with it is, that it is too expensive. Mr. Cutting had on exhibition, also, a buzz-saw to run by steam or water-power, which I think I can safely recommend to all bee-keepers. I omitted to say that Mr. Joseph Butler of Jackson, drew the second prize on honey as a product. He had some fine samples.

My bees are in good condition. I have some 380 swarms. Have sold quite a number recently. MARCUS WRIGHT.

Middleville, Mich., Sept. 22, 1877.

For the American Bee Journal.

Imported Queens and Breeders.

In the September number of the JOURNAL, page 308, Mr. Ch. Dadant takes the liberty to say in effect, that there are a few queen breeders who do not like imported queens, and that few are dishonest and that their dishonesty is the cause of that dislike.

Now, I wish to know whether it is *imported* queens that are disliked, or whether it is not such as he sends out as *imported*, that those breeders dislike; I fear that it is the latter, if Mr. D. is right that there are no impure bees in Italy.

He says: "They (those sharpest of breeders, who wish a class of bees that though *impure*, they can sell as *pure*, to their ignorant and confiding customers) have very yellow bees; some have queens yellow to the tips of their abdomens, and workers with four yellow bands. If a daughter of these queens chances to mate with a black drone, her workers will lose a yellow ring, but will have yet three left."

Now I submit the proposition squarely to the intelligent bee-keeping world, that no such queen so mated ever failed to produce some workers with as much yellow as her mother's had, and some with two yellow bands and others with one and some with none, no "rings," as black as the blackest.

I submit further, that no queen can be found whose workers are strictly uniform, four band bees, unless the so-called Albino queens are such; I will give $10 for one.

I do not doubt that Mr. D. "could show many letters complaining of the small number of pure mating of the daughters of imported queens;" because, if the drone happens to be a purely black one, a very large proportion of the worker progeny will be as black as a tar-bucket, and *his* customers *see* it: and so too, can the taint of impure impregnation be seen by the experienced eye, even if the young queen is from a mother of the "improved" breed; the color of the progeny will be affected as much by the impregnation, in the one case as the other; but there is no such thing as impurity of impregnation causing the workers to "lose a yellow ring," for no pure queen, impurely impregnated ever produced uniform workers of any color; when the blood is so near pure that none lose more than one ring of yellow, there will be 75 per cent. of the workers as bright as if the impregnation had been pure, and many of those of the 25 per cent. showing the taint, will not show the loss of an entire band of yellow, only a small smutty spot appearing on the first band, others will show only a small yellow spot on the first band.

I do not wish to be understood as holding that *brightness* of color is the standard of purity of Italians, but that it is the distinct uniformity of the yellow on three bands, at least, whether it be bright golden, or clear copper, or leather color; whenever we secure the proper color, we have the other desirable qualities, unless they have been lost by improper manipulation, such as in-and-in breeding, rearing queens in too cool weather, from too old brood, in too small colonies, or too scant stores, etc.

I am not the Andrews to whom Mr. Dadant refers, but I am one of the class that he strikes at. I do not like his smutty Italians, for I believe they are impure, if they do come from Italy.

I think our class is as free from sharpness, or a desire to humbug or swindle, as Mr. D. or any other advocate of smutty Italians. I will not throw dirt back at him.

W. H. ANDREWS.

McKinney, Texas.

For the American Bee Journal.

"I Can."

We have had a good season here for bees—the best for many years. Last winter was so unfavorable that Jack Frost left us with only a few weak colonies to begin with. I commenced in the spring with one colony of Italian bees—purchased of Mr. G. H. Jones—and up to date, I have increased to nine, losing two which went to the woods, leaving me with seven strong ones. Have taken 210 lbs. of extracted and box honey, and raised a dozen or more queens extra, and I now throw down my "old straw hat" and cry "Peace and plenty;" with bees still storing honey in boxes, and a prospect for a good yield of honey from the aster—which we call steel-weed—and golden-rod, this and next month. I use what I call the Langstroth two-section hive. 8 frames 10x15, with boxes on top. The queen I used this season is a daughter of one of friend Alley's dollar queens.

And now, Mr. Editor, you see I have knocked that big story of his into nothing; and if I get the two "yaller" queens ordered of him last June, I think that I can rival California. Now, friend Alley, you see "I can."

J. M. GLENN.

Jefferson Co., Tenn., Sept. 11, 1877.

New York Bee-keepers' Association.

A meeting of bee-keepers and others interested in bee-culture—residents of New York City and vicinity—was held at the Cosmopolitan hotel, on Friday, 7th September, when the New York Bee-keepers' Association was organized, with the following officers:

President: J. S. Coe, 33 W. Forty-fifth street, city; Vice Presidents: J. W. Chambers, room 20, Cooper Union, city; Dr. E. Parmly, 19 W. Thirty-eighth street, city; C. J. Quinby, White Plains, N. Y.; E. J. Peck, Linden, N. J.; J. B. Mingay, 19 Christopher street, city. Treasurer: Theo. F. Read, 35 Atlantic avenue, Brooklyn, L. I. Secretary: W. S. Slocum, 117 Sixth avenue, Brooklyn, L. I. Executive Committee: J. S. Coe, *ex-officio*, W. M. Hoge, J. Hasbrouck, Mrs. Anna L. Botta, and Miss S. E. Fuller.

It was moved and seconded that the Executive Committee be authorized to prepare a constitution and by-laws for this society and report the same at our next meeting.

A. J. King (editor of the *Bee-Keepers' Magazine*) said that while he had declined to accept any nomination to an office in the society, he was greatly interested in its success and prosperity and would do all he could for it as readily as if he held an office.

He thought that inasmuch as a great number of bee-keepers visit this city, at least once a year to dispose of their honey crops, it was very desirable to hold an annual meeting *here*, which would undoubtedly be largely attended by persons interested in bee-culture, and would enable producers from widely separated portions of our country to meet each other and become better acquainted with the receivers of their products. He thought that valuable information could be derived by the members listening to and taking part in the discussions, addresses, and queries regarding their pursuit, and by the interchange of ideas incident to such an annual gathering, all who attended would feel amply compensated, and that a large majority of the bee-keepers would be glad to arrange the time of their yearly visit to correspond with such an annual gathering.

W. M. Hoge (in charge of the honey department of Messrs. H. K. & F. B Thurber & Co.) said he was much pleased to hear Mr. King's suggestions in reference to an annual meeting of the bee-keepers of the country in this city, and thought by holding an annual show of honey and apiarian supplies, in connection with the yearly exhibits at the American Institute, the occasion would be pleasant and profitable to all concerned, and greatly benefit the cause of apiculture.

The New York Bee-keepers' Association being much interested in the preparations for the Honey Show to be held at the American Institute Fair, and in the National Bee-keepers' Convention, which is to be held in this city on the 16th, 17th, and 18th of October next, President J. S. Coe, who is one of the Vice Presidents and Committee of arrangements for the National Convention, was requested to inform the meeting what arrangements had been completed thus far.

President Coe reported that Mr. C. W. Hull, General Superintendent of the Grand National Exhibition of the American Institute of the city of New York, informs him that the managers will be pleased to do all they can to forward the exhibition of honey, etc., and will admit for exhibition such samples of honey as may be furnished, for which they grant table space, and floor space for the display of hives and other appurtenances.

One fee only will be charged the society, in which case the entry is to be only for *exhibition* and *not* for *competition*.

Individuals who wish to exhibit goods for competition, except for the gold medal, will be required to pay the usual individual exhibition fee.

Each delegate to the convention will receive, free of charge, three single admission tickets.

Delegates to the convention will be accommodated at greatly reduced rates at the Brigg's House, near the Grand Central Depot, Forty-second street. Lodgings, 50 cents per night; meals, 25 to 75 cents.

The Exhibition Buildings are situated on the block bounded by Second and Third avenues and Sixty-third and Sixty-fourth streets.

W. M. Hoge reports that through the liberality of Mr. Peter Cooper, the use of the large hall of Cooper Union will be given, under the auspices of the American Institute, for holding the meetings of the National Bee-keepers' Convention, beginning 16th of Oct. 1877.

Messrs. Thurber & Co., offer a $50 Gold Medal for the best display of comb-honey in the most *attractive* and *marketable* shape.

All exhibits for the Fair, consigned to Messrs. H. K. & F. B. Thurber & Co., will be transferred from the depots and piers by careful and experienced hands and placed in position in the Institute Building, *free of charge*, and at the close of the Fair they will either buy, sell, or reship the goods at the option of the exhibitor.

Mr. Hoge presented letters from sundry persons to Messrs. Thurber & Co., all evincing a lively interest in the coming Convention and Honey Show. Among others we notice the following:

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., Aug. 21, 1877.

Messrs. Thurber & Co., New York City.—

GENTLEMEN:—"Thanks for your timely letter calling attention to the Bee-keepers' Convention. No doubt it will be an opportunity to secure some statistical knowledge that ought to be and must be improved. It had not come into the field of my vision, although I have been, and am, searching for all sources of the nation's wealth, that come properly under the supervision, notice, or control of this department. If possible I will send you some statistical or other information to use as you suggest."

WM. G. LE DUC, Commissioner.

FROM PROF. SILLIMAN.

GENTS:—"Regarding the Bee-keepers' Convention, to be held next October, I am much interested and shall take pleasure in contributing all I can towards its success."

B. SILLIMAN, Yale College.

BELLEVILLE, N. J., 7th Sept. 1877.

Messrs. H. K. & F. B. Thurber & Co.—

GENTLEMEN:—"I am unable to attend the Bee-keepers' Meeting to-day. I have prepared for exhibition at the American Institute, a simplicity hive—Langstroth frame—and several specimens of larvæ, etc., in alcohol. I also expect to put in an Observation Hive, of one comb having a queenless colony with drones on one side and a full colony on the other. I shall be very glad to exhibit through the Convention."

R. FERRIS.

After some further interchange of ideas it was moved and seconded that the secretary notify officially the persons elected as officers to this Association.

It was moved and seconded that the Executive Committee be empowered to fill any vacancies or to add to their number, not to exceed three more than now elected.

It was moved and seconded that the proceedings of this meeting be reported for publication to such papers as may be favorably disposed to the bee-keeping interest.

It was voted that this meeting adjourn to meet in room 24, Cooper Union, on Saturday, 22d September, 1877, at 12 o'clock M.

An opportunity will then be given for any one to become a member of the New York Bee-keepers' Association by signing the roll and paying the membership fee of $1, when credentials will be furnished each member of this society, which will entitle him to three single admission tickets, free, to the American Institute Fair to witness the entire exhibition, including the Honey Show on the 16th, 17th, and 18th of October.

Persons who cannot make it convenient to be present at our meeting on the 22d of September, can become members of the Association by remitting the membership fee by P. O. money order or registered letter to W. S. Slocum, Secretary New York Bee-keepers' Association, who will send by return post the credentials, giving the three free admissions as above noted.

It is hoped that every person receiving one of these circulars will consider himself especially invited to forward for exhibition anything of interest in anyway connected with bee-culture. Send what you can and do not fail to be present at the meeting.

W. S. SLOCUM, Secretary.
117 Sixth Avenue, Brooklyn, L. I.

For the American Bee Journal.

Wintering on Honey-Dew.

In the article entitled, "A visit to an Illinois bee-keeper," speaking of Mr. Anderson's comparison of his black bees and those of his neighbor's Italians, you make me say *black* instead of *Italian*. Please correct me if the mistake is mine. [The mistake is in your copy.—ED.]

In an article in the JOURNAL, headed: "Various Topics," Mr. Martin asks information in regard to the honey-dew as food for wintering bees. He says that species of trees upon which the dew is found is confined to the beech and maple, and thinks that the honey is slightly acid.

I have seen it on the chestnut, cherry, peach, oak, ash, etc; and have had considerable experience with this kind of honey. I will say that I had almost as soon find all my bees dead some morning, as to run the risk of successfully wintering them on such kind of food. It is more fatal in its effects than all the ravages of the dreaded moth, loss of queens and foul-brood put together! In fact I consider its presence, in any season, as the certain precursor of the only foul-brood known in this country. It seems to retain its watery particles so long, and the acidity becomes so strong that it is almost certain to prove the destruction of nearly every colony that is in possession of it.

The long confinement of the bees in their hive during winter, causes almost as certain destruction as if they had been treated to a dose of brimstone, although its effects are not as speedy! It is said by some apiarists, better versed in bee-culture than I am, that bees will live upon any kind of sweets, as long as they can fly out occasionally and discharge their fæces; but I think that a month or 6 weeks at a time is long enough to give them this American foul-brood to such an extent that their doom is certain. Their discharges are as black as tar, and they void it in all parts of the hive, creating a most offensive stench, which, if it is as offensive to them as to us, it is no wonder that such a speedy destruction awaits them.

Three years ago, we had a very dry Aug. and Sept. here. Honey in the fields was all gone, and the little yield of buckwheat was of a very poor quality. Honey-dew came, and the bees went for it in masses, filling their hives, and when winter came they had but little other food than the juice of the aphides; and the consequence was that I lost 18 out of 20 stands. A neighbor of mine lost 60 out of 80. Another, 23 out of 24. Many others lost all they had.

Last year we had more of it, with about the same result. One neighbor lost 25 out of 50; I lost 10 out of 26; one of my nearest neighbors lost all he had—16. Some stands that appeared strong, and flew vigorously when put upon their stands this spring, soon began to fail, and even after commencing to carry in pollen they died out entirely, leaving brood in the combs.

K. P. Kidder advances the idea that all the saccharine matters scented by the flowers one day, unless it is all gathered by insects, is absorbed by the atmosphere, and at night falls with the dew. If that were the case would it not be alike upon all kinds of timber? I have seen it dripping to the ground from some kinds of timber, while there was not a particle of it upon other varieties, standing so that their branches almost touched. Such things will not harmonize with K. P. K's theory!

Three years ago I sent T. G. McGaw, of Monmouth, some leaves from the jack oak, (so called in this section) upon which the insect had been busy, eating every particle of the tender part of the leaf from its framework; it left then nothing but frames of tendons, so to speak. His reply was "that it was evidently the work of an insect."

Upon all the trees where the honey deposits were found, were the same marks of insects, be they what they may, and upon no others, etc. C. HOTCHKISS.

Rock Island Co., Ill.

For the American Bee Journal.

A Cheap Bee House.

I find on page 298 an inquiry from Mr. Gustave Hisch, in relation to a cheap bee house, and friend Andrews' invitation to those having experience in constructing such houses.

Two years ago I was without a proper bee house, and not having a great amount of capital to invest, I studied upon the subject, and the result was the construction of a house upon the following plan:

We first dug down about 4 feet into the ground in a place that could be drained, and removed the earth from a space 18x12 feet. We put down six posts, 10 ft. long, on each side, and united by girts 7 ft. from the floor. We covered the whole interior with matched boards, and filled in on the outside with the dirt removed from the interior. As we dug down 4 ft., the 3 ft. above ground, was built up with stone and dirt, making a thickness of 4 ft. all around. The space directly over the bee room was filled in with sawdust 1 ft. thick. To the projecting ends of the posts, we built a roof that covers all, it covers a space about 30x20. In the centre is a ventilator; there is but one entrance, with double doors. We have wintered 80 swarms in it successfully, and use it during the summer for extracting and in which to store honey during the hot weather. It is a delightful place in which to work, being "charming and cool."

The outlay in cash on our house did not exceed $15. We have in addition to our wintering room a large loft in which to store various utensils. It is well to have such a house built early in the season, that all moisture may dry out before storing the bees therein. A house on the same plan can be made much smaller for small apiaries. We think a house 8x12 would accomodate 75 swarms, but it is well not to crowd too many into one room.

We have lately seen so many testimonals from apiarists in various portions of the country in relation to chaff packing, and our experience in that direction leads us to discard indoor wintering. We intend to give both plans a trial during the coming winter. We go into winter quarters with 110 swarms —enough to try various plans, but none to try hazardous experiments with.

We do not wish to spoil your trade in slates, but wish to tell your readers that dealers in school books sometimes have broken school slates on hand, which can be obtained at small cost, and can be cut up into the size desired. I have used them several years and could not dispense with them. J. H. MARTIN.

Hartford, N. Y.

[Friend Martin need not be alarmed at our slate trade. We got them wholly for the convenience of bee-keepers, and not for the purpose of making a profit on them. Had that been our object, we should have been sadly disappointed, for the margins on them are infinitismal.—ED.]

For the American Bee Journal.

Answer to Dadant.

Mr. Dadant in his answer to Mr. Henderson on dollar bees and imported queens, reminds me that I did not answer his short question in the *Bee World* last year or year before, I forgot which. When I read his answer I determined not to neglect to answer it, but press of other business did cause me to neglect it till now. Friend Dadant is right. My first importations from Italy were from Uhle as Dadant says. I, with Nesbit and Dr. Hamlin and Winder formed a club and received three importations, very few queens alive in any of them; when we tried them, not one of us would give 10 cents for such queens though we had already paid $4 each besides the express. I am the only one who condemned them in any of the journals that I know of. The other parties got no more good out of them than I did, though if they ever published it I never noticed it. But this all amounts to nothing as I got rid of Uhle's queens the same season I introduced and found them to be Hybrids. There has not been a year since, that I have not had good imported queens in my yard either from Italy or the yards of Dr. Hamlin, Nesbit, Grimm, etc. Those I got from the latter apiaries had been tried before they were sent to me and were all good ones. I think Nesbit got the one he sent me from Dadant's yard, as he had used her one season in his own yard. Of all other queens I imported direct from Italy, I never got but one to suit me exactly. This is why I make so few importations direct from Italy. I would rather buy from other breeders that import to be sure to get good ones. I would by no means be understood as discouraging importations from Italy. No, I am in favor of it and intend during the winter to make arrangement to import a good number next season. I agree with Dadant in the main on dollar queens.

Now friend Alley, let me ask you one question. Don't your Northern patrons say your queens are too bright, and your Southern ones say they are not bright, or *quite* bright enough? This has been the tone of my patrons for years to such an extent as to make me believe that the brightest queens are raised South or the Southern people prefer the bright yellow. If I were running my apiary for honey exclusively, I would prefer a dark leather color, both queen and workers. All of the most prolific, pure Italian queens I ever saw were a dark leather color, and the three bands on the workers very thin or fine. Also the small queens are more prolific than large ones as a general rule. Yet the people cry for the large, bright yellow and we have to furnish them with the sort they want. But for that, I guess that nine-tenths of the breeders would go for the dark leather color.

There are a good many other articles in the September number I would like to answer, but for want of time will have to defer the pleasure. R. M. ARGO.

Lowell, Ky., Sept. 13th, 1877.

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The North Mo. Convention.

Met at Auxvasse, Calloway county, Mo., on August 1st, 1877. Hugh Hamilton, president, in the chair; the Secretary being absent Mr. P. P. Collier was appointed Secretary *pro tem.* The following persons were added to the membership: J. J. Crowson, Oscar Black, Rev. W. W. Trimble, Geo. C. Fuller, H. I. Williams, M. McClintock, Dr. E. C. L. Larch, John T. Sailor, Wm. Y. Parmer and Ed. McCracken.

At 2 p. m. the following programme was announced:

"Swarming, natural and artificial," A. A. Collier.

"How to secure the most honey," John Sallee.

"Marketing honey," P. P. Collier.

"Honey, its sources and how gathered," B. F. James.

"Our best honey plants," R. L. Davis.

"Honey dew," Robert Sallee.

SWARMING, NATURAL AND ARTIFICIAL.

Mr. A. A. Collier said he preferred artificial swarming from several considerations. 1st, it is more safe. I can ascertain their condition when I have a strong colony of bees with one cell. At the proper time I set two hives. (I use Langstroth's). I take from my full colony four frames with bees adhering, place in empty hive, leaving the old queen with the old hive, insert my cell, remove old hive a rod off, place new one on its stand, and will soon have a better swarm than the first. My hives are placed in a circle so that I can stand in center and see the entrance of each hive.

Mr. Trimble wanted to know how he got the bees in new hive.

Mr. Collier—If I have not bees enough on the cards given, I shake from other cards a sufficient number of bees, after sprinkling with sweetened water, scented with peppermint.

Mr. Bane—Bees disagree, by disorganizing them there was no danger of fighting.

Mr. Collier asked why bees fought?

Mr. Sallee did not know; thought a bee filled with honey would be received friendly in any hive, but a hungry bee would meet with rough treatment.

Mr. Collier—I brought two queens some seven miles away, introduced them into new formed colonies; one was killed, the other received friendly—all scenting alike.

Mr. Sallee—The difficulty was, probably, that one was disturbed soon after, while the other was not.

Mr. Collier—This was the case.

Mr. Sallee—I favor clipping queen's wings, for sometimes two or more swarms come off—all went together; but if he had his queen's wings clipped he could capture the queen, change locations, put in queen in new hive on old stand, and the circling swarm would soon return, enter new hive and all was well; but after-swarms were more difficult to control.

The President—Remove all cells after the first swarm, and all difficulty of after-swarms was removed.

"HOW TO SECURE THE GREATEST AMOUNT OF HONEY."

Mr. Sallee said he ought to be excused, but would do the best he could. He had been theorizing, but for honey-gathering he preferred his first swarms rather than his old ones. Extracting was the best not only to secure the greatest amount, but would stimulate the bees to gather more than in boxes. If you want box honey you must have the bottom story full, as bees would not enter boxes unless full below. Mr Bane said Mr. Smith's queens went into his boxes, the cause was that they were on new swarms. It would not be the case on old hives. Put on boxes on old stands early, but on new not until late.

Dr. Larch said raise and slip boxes under.

Mr. Sallee said many questions might be considered. One man fed his bees honey in spring; they accumulate much more than those not fed. Plenty of comb was necessary as it required 20 or 25 pounds of honey to make one pound of fat or wax.

Mr. Trimble asked how about foundation?

Mr. Sallee had no experience.

Dr. Larch said it was good for starters in boxes, but did not favor it for the main hive.

Mr. Sallee said extracting was the best, but others wanted to know how to get box honey.

Mr. P. P. Collier—Extracting was beyond question the best to secure the greatest amount of honey, but there were other things to be considered. Bees must be kept strong; queens must be prolific; plenty of room to deposit, and last, but not least, a good pasturage is indispensible; not all are favored with good natural pastures. This is in the power of man, and it is his duty to furnish good pastures—early and late—to secure a good yield of honey.

Mr. Bane—Get the bees and you would have the honey; it was necessary to keep bees quiet and satisfied to work well. Young queens were essential.

President—A queen one year old was better than a young one. (Here the subject ran into swarming and no vote was taken.)

Mr. A. A. Collier—Give bees room and they would make honey—a flour barrel could be filled, etc.

"MARKETING HONEY."

Mr. P. P. Collier said he had had no time to prepare. The subject was of vast importance; indeed, one that interested every producer. Honey was, to some extent, as other products of the farm—governed by supply and demand; but this season did not promise to be an average. California was almost a failure. Other localities reported had, and I don't see why we cannot sell at good figures. It is many times the case that large cities are overstocked with honey while the home market is good. It is sometimes the case that an inferior, green honey is thrown upon the market, thereby damaging the sale of good. I would strongly insist that this Association put none but the best, ripened honey on the market, and demand a living price. We don't believe in monopolies, but the mercantile world—the mechanical and all other branches of business organize for the sale of their wares, and why not we? If some of us sell at low figures, it debars the sale of others at better prices, and I do urge a unanimous effort to secure a home market and at fair prices. I read from various reports, that this one sold all his honey at 22 cents, one sold at 20 cents, another at 25 cents, and still another at 18 cents. Now I just had the pleasure of seeing together honey from four different States. Since that time I have seen honey from this State, and must say we produce as good or better honey here as anywhere.

Dr. Larch—Open up a honey market, appoint a committee to co-operate with dealers, and to search out and report the best market.

Mr. Trimble asked the weight of honey.

Mr. P. P. Collier said there was a difference; early and white clover weigh about 11½ pounds, while Spanish needle would weigh 12 to 12½ pounds.

Mr. Sallee—The questions were very important. Some produced honey for home use; but the majority produced it for the dollars and cents. He found it difficult to sell when syrups could be bought at 50 cents.

Mr. Bane—Analyze the various sprups and molasses, and thus prove the superiority of honey over them, for they were unclean and unhealthy.

Rev. W. W. Trimble thought this was a move in the right direction, and made a motion for a committee on selling of honey, whereupon P. P. Collier, Mr. John Sallee and F. P. Bane were appointed.

Mr. Sallee—Convince the people of the superiority of honey over molasses and the difficulty would be removed. He had sold at 25, 20 and 15 cents.

Mr. A. A. Allen thought barrels were preferable. Dr. Allen used them, and had no trouble in selling at 15 to 18 cents.

Dr. Larch—I use half barrels; they suited the market much better than larger ones.

Mr. Parker, a honey dealer of Illinois, had better success with half barrels than larger ones. He retailed at 25 cents. He said the people of Pike county, Illinois, could not believe that 5,000 pounds of honey could be produced on our farms—all such was "made honey."

Mr. Bane—Quinby carried all his, and his neighbor's honey, to market; and never failed to find a market.

Mr. Sallee said he sold his box honey at 18 cents, while his neighbors sold strained and squeezed at 12½ that was very inferior to extracted.

Mr. P. P. Collier—There is as much difference between strained and extracted as there was between good syrup and bad sorghum.

Mr. Trimble thought a grading committee would be of advantage to sellers.

Mr. Sallee—Let honey get ripe before extracting; let it set open; draw off from the bottom to can it.

President—Some one had suggested to hold honey until there was a good market, but he opposed it. He said he shipped two barrels to Mr. Coleman, St. Louis; held it over, and one barrel spoiled; the other he ordered back to feed on; it had lost its flavor, etc.

Mr. A. A. Collier asked if it was in new barrels?

The President said it was in old molasses barrels.

Mr. Collier thought this was the trouble, for new barrels would keep honey much better than old ones.

Mr. Trimble asked if extracted honey would keep as well as capped?

Mr. Sallee said if it was ripe it would keep as well.

Mr. Trimble—Would honey granulate under all circumstances?

Mr. Sallee said pure honey would.

Mr. Trimble had two boxes that did not granulate.

Mr. Sallee said he might be mistaken but believed he was right.

Dr. Larch said he had warmed up honey in comb to extract, and found much grained honey in the cells.

Mr. Smith asked if there was any way to keep honey from granulating?

Dr. Larch—If kept at even temperature it would granlate but little.

Mr. A. A. Collier—Keeping it in a cellar would prevent granulation.

HONEY DEW.

Mr. Sallee gave his opinion of it, though he was not fully satisfied as to its origin.

Dr. Larch—Bees cannot gather it after it dries.

Mr. Sallee said honey gathered from this source did not sell well.

Mr. Fish read from Prof. Cook showing it to be a real Honey Dew.

Mr. P. P. Collier—Had seen it very abundant in Ky., had seen Dr. Allen's bees gathering it from the oaks, had eaten the honey, pronounced it dark, but fair-flavored, not so good as other honey. During a drouth, about the 1st of July, he had seen it very abundant, and believed it to be really a Honey Dew.

Mr. S. Riley did not believe the bees gathered it.

Dr. Larch thought they did.

Mr. R. Sallee—Bees gather something from the oaks, did not know what.

Mr. F. P. Bane—It was a deposit of an insect, the Aphides.

Mr. Sallee—Had seen it very abundant when a boy.

President—By a careful investigation found that the Aphides deposit it, had seen it fall from the insect while playing, had on hand at one time 1,000 pounds from it, but did not sell well.

Mr. J. Sallee—Believed it to be real Dew, and that the insects were drawn to it from its sweets, instead of producing it; thought it unaccountable.

Mr. Riley—The sweets would draw all kinds of gnats, etc., just as molasses would.

Mr. R. Sallee—This subject should be investigated.

Mr. P. P. Collier—If it be honey, then we must admit that it is from the same source as other honey; if not, then what is it? The great Father created bees and put them here, not to starve, but made ample provision for their subsistence, and as the manna fell in the wilderness, so the dew falls for the bees. One says it is the production of the Aphides; if so, tell me where they get it, and how produced?

Mr. Bane—Never saw any honey dew only when the insects are flying; all insects have their time, and the Aphides have theirs to deposit the drops we see on the leaves. Why do we not have honey dew every year?

Mr. A. A. Collier said the same that produced honey one year did so on another. The Aphides came one year and did not another; where we had Aphides we had honey dew, if they did not come we had no dew.

Mr. Sallee—Sorghum taken by bees was still sorghum, so with all sugars, but the dew turned to real honey.

Mr. A. A. Collier—We must call it honey (for if the bees carried it in, it was honey) after the source whence gathered, we say white clover honey, Spanish needle honey, etc., now if it be sorghum we must call it sorghum honey. A lengthy discussion followed until the hour arrived for adjournment.

PROGRAMME FOR THE SECOND DAY.

"The best hive," F. P. Bane.

"Agriculture as taught in Agricultural Colleges, Prof. G. C. Swallow.

"Honey as an article of food," Dr. P. French.

"Queen rearing," Dr. E. C. Larch.

"Italians vs. Blacks," Dr. Morse of Columbia.

"Who should keep bees," D. H. Chase.

Mr. Bane read a very able paper setting forth the advantages and disadvantages of hives from the log gum to the various patent hives, winding up by giving the Langstroth as "The hive."

Mr. P. P. Collier said that the advantage of the Langstroth over the American for extracting, was that in the latter the honey and brood were all together and in the former it was not, for it had two chambers, the lower for brood, the upper for honey. The lower gave the Queen plenty of room for brood, the upper story plenty of room in which to store honey. The cards of comb were easily removed and changed about, while in the American it was more difficult.

Mr. Sallee said a hive without side openings was objectionable. for he could not help crushing bees and honey, he did not fully approve of the American, but thought if it was so constructed as to use a honey board, it would answer every purpose. He had the Quinby and thought it very nice when there was no bees in it; the double walls for practical use he did not like.

Mr. A. A. Collier had just transferred two colonies without the destruction of a single bee; he killed more bees in the American than in any other hive, it being necessary to use muscular force to get the frames back and the doors shut; he much preferred the Langstroth.

Mr. Bane did not like doors and slides as the bees would stick them fast; this was obviated in the Langstroth.

Mr. J. Sallee—Better and straighter comb is built in the American than others.

Mr. P. P. Collier—The American frame was deeper and bees would go straight to the bottom (if the hive set level); so it was in the Langstroth, could not see why as good comb could not be obtained in Langstroth as any hive.

President—It is often necessary to extract from the brood nest to give the Queen room; he liked the Langstroth very much.

Mr. W. W. Trimble—The advocates of the Langstroth proved to him that there were more danger of killing bees than others; he liked the Cottage; he believed he would turn inventor—put a top story on the Cottage hive.

President—The Cottage is objectionable, as the bees get too much on the outside.

Mr. Sallee had some experience with the Cottage hive; he put some comb in frames, then attempted to get in the bees, they ran around on one side; he followed with smoke, they ran on the other side; he chased around and around until exhausted, failing to get his bees in. He did not like the doors and slide glass.

Mr. A. A. Collier asked what use to a hive were doors and slides?

Mr. Sallee—Because a two inch comb could not come through an inch and a half space (having reference to the Langstroth frame.

Mr. A. A. Collier—I can move the frames so as to have three inch space, to raise a one and a half inch frame. He saw no use in glass in hives, for when the bees were in they covered the comb so as to prevent seeing what they were doing. The Langstroth was preferable on account of robbers, etc.

Dr. P. French and Professor Swallow not being present, the 2d and 3rd questions were passed, and the 4th taken up by Dr. Larch of Ashland, who read a very able and instructive paper on "Queen Rearing." This was listened to with that profound respect due to one who knows "whereof he speaks."

ITALIANS VS. BLACKS.

Dr. Morse not being present, an informal discussion took place resulting in favor of the former.

"WHO SHOULD KEEP BEES."

Mr. D. H. Chase said there was a difference of opinion as to the meaning of the proposition.

Mr. A. A. Collier said all had a right to keep bees, and we had no right to say who should or who should not; some keep them for profit; others for pleasure.

Mr. P. P. Collier thought differently; it meant adaptation. "Who is adapted?" "Who should farm?" "Who should be a mechanic?" He must love to work with bees, if he has not, he had better sell out to those who had, or be a loser.

Mr. J. Sallee—Ladies should keep bees; they were always at home to see to and watch over them; he thought they were the proper ones to keep bees.

HOW MUCH HONEY SHOULD BEES HAVE TO WINTER ON?

President—On summer stands, 25 to 30 pounds; if housed not so much.

Dr. Larch—Leave plenty.

Mr. J. Sallee—Too much honey is not as good as enough, for bees chill on honey.

Mr. P. P. Collier—My experience is that bees winter on sealed honey even much worse than empty comb, let them have plenty of honey, above them empty comb to cluster on, as sealed honey is much colder than empty comb.

Mr. A. A. Collier—No man ever saw too much honey for bees to winter on; the idea is preposterous for a man to say too much honey killed his bees.

Mr. Sallee—In 1876 too much honey froze my bees.

Mr. Palmer—No danger, he wintered on summer stands with 50 pounds or more.

Mr. Bane said honey was not colder than comb.

Mr. Trimble—Could not see that honey was any colder than empty comb. It is an admitted fact that any two substances close together were of the same temperature. For instance a block of wood and a bar of iron near together was of the same temperature, but the iron being a good conductor of heat or cold would appear much colder than the wood, so it was with comb and honey.

Mr. P. P. Collier—Will the gentleman tell me the difference between a feather bed and a lump of ice in the same room?

Mr. Trimble—No difference in the temperature; the ice being a conductor would impart it much more freely than the feathers.

Mr. W. H. Collier—Here lies the whole secret; honey being a conductor of cold, its tendency to throw it off will chill, and even freeze the bees, which wouldn't be the case on empty comb.

President—Too much honey is detrimental to the wintering of bees.

The hour having arrived for adjournment, further discussion was dispensed with. The President and Secretary were ordered to prepare a programme for the next meeting. Notice was given in writing by A. A. Collier, that at the next meeting a motion would be made to change Article 8. Section 8 of the Constitution so as to admit ladies free of charge.

A resolution of thanks to the owners of the Hall for its use during the session, also to Dr. Larch of Ashland, and F. B. Bane of Callaway, for the able papers on "Queen Rearing" and "Hives," with permission to spread on the minute book and for publication.

Adjourned to meet at McCready, Callaway county, Mo., on Wednesday October 31st, 1877. Hugh Hamilton, Pres.,
P. P. Collier, Sec.

Report from G. M. Doolittle.

On June 1st 1877, we (that is, my better half and myself,) found we had but 80 stocks of bees, 50 of which were good fair colonies and 30 weak. On June 12th we decided that 13 of the 30 weak ones, were so weak that they could not be worked for honey to any purpose, so we broke them up into 30 nucleus colonies to raise queens from; all practical apiarists know the advantage of keeping queens constantly on hand. We had, practically, but 67 stocks with which to commence the season. Two of these we decided to work exclusively for extracted honey, and the remaining 65 for box honey. We have at date, 152 colonies in good condition for winter. White clover began to yield honey June 18th and our bees began to build comb in boxes soon after. Basswood opened July 14th and lasted till the 28th, which with teasel, yielded abundantly. About August 2d the flowers failed to secrete honey entirely and we could only work at taking off honey nights and mornings on account of robbers. This failure lasted until August 16th, when buckwheat began to yield honey, and lasted until Aug. 25th, when our season for 1877 was over.

The result of our season's work is as follows:

Box honey........	white......	8,761 lbs.
"	... .dark......	1,523 "
Extracted.....................		893 "
Total 11,177		

Our average yield from the 65 stocks worked for box honey was 158 lbs per stock. Average yield from the two worked for extracted honey, 446 pounds. Average yield from the 67 stocks of both box and extracted honey, 166¾ pounds per colony. The best stock worked for extracted honey gave us 566 pounds. Best yield per day was from July 21st to 24th, being 66 pounds or 22 pounds per day. Three stocks worked for box honey which we kept record of gave us 896 pounds, the best giving 309 lbs; the second, 301; third, 288 pounds. We had several others that did nearly or quite as well, but we kept no record of them. We have always been satisfied with giving the average yield per colony of our apiary, and should have been so now, were it not that Novice stated in *Gleanings* that the test of a hive was to be what a single colony produced, and that the hive we used was altogether too expensive a "rigging."

In conclusion, we would say that with a practical apiarist, bee-keeping is a paying business, even at the present prices of honey. We have cleared nearly $6,000 from our bees, free of all expense within the last five years, with an average of about 50 stocks in the spring of each year. However, bee-keeping only pays when our pets are properly cared for, and if any one cannot spend the amount of time on them they require, he had better keep out of the business, for sooner or later he will turn away from it in disgust. G. M. Doolittle.

Borodino, N. Y., Sept. 12th, 1877.

For the American Bee Journal.

Dzierzon Queens and Cyprian Bees.

I have received the August number of The American Bee Journal, and read with great pleasure Chas. Dadant's article on "How we may improve our bees." Will you allow me, Mr. Editor, a few remarks concerning it?

1. Chas. Dadant says, "By selection, Dzierzon succeeded in raising the best colored Italian bees obtained so far. But according to my opinion his selection, confined to color, was too one-sided; since his bees, as to activity and prolificness, are notable to sustain the comparison with the Italians in their native country."

It is true, Dzierzon did succeed in raising the best colored Italian bees. No one in Germany has reared finer and lighter colored Italian queens than he, but no one can say that *all* his beautiful queens are less active and prolific than the Italians in their native country. Should such an eminent and clever bee-keeper as Dr. Dzierzon be so one-sided as to rear queens only to have and sell, beautiful and not active and prolific queens? No. It may be that some of Dzierzon's queens are not as active and prolific as might be wished, but that does not prove that ALL his queens are so. Every queen-raiser will sometimes rear from his best queens some less active and prolific queens, but he can not know it before it is demonstrated by experiment and then he will find such queen and give the colony a better one.

2. As to the Cyprian bee, which I have reared more than three years, allow me to say that the importer of this wonderful bee, the Count Kolowrat at Castel Hroby, Austria, first introduced the Cyprian bee in Germany and afterwards his friend Cori in Bruex sold queens of this kind. The noble Count does not sell queens, but it was, and is his pleasure to present his friends with a Cyprian queen.

Mr. Chas. Dadant writes: "Mr. Cori does not say in what it (the Cyprian bee) is better than the other kinds; he says it is more noble. Did Mr. Cori not say this, pray? Let me explain in what the Cyprian bee is better than the Italian bee.

1. Queens and worker-bees are more beautiful.

2. It is a well-known fact that the most of the Italian colonies do not winter as well as black bees, and very often suffer by spring dwindling. This is not the case with the Cyprian bee. I have reared in three years many a Cyprian queen—(not to sell them with a few bees, but for my own use and to sell them in full Cyprian colonies in the spring) and every such colony wintered well, coming out strong in the spring.

3. The Cyprian bee will not swarm so much as the Italian bee, and does not build so much drone comb as the latter.

I will not say the Cyprians work better than Italians, but it is certain my Cyprian colonies yielded me every year the greatest honey harvest. As to stings, it used it neither more nor less than the Italians.

C. J. H. GRAVENHORST.

Brunswick, Germany, Aug. 20th, 1877.

For the American Bee Journal.

Bee Hives.

It seems as though from the amount written upon this subject, that it had been so thoroughly investigated that bee-keepers need no longer be at a loss to know what kind of hive to use, and yet hardly two persons are satisfied with the same hive.

Bee-keepers have, no doubt, been most thoroughly humbugged by bee hive vendors; and no wonder, as soon as apiculture received its first impetus and the people began to catch the bee fever, many unprincipled agents rushed to the front, very few, if any, of whom understood anything about either bee-keeping or mechanism, and whose only object was the Almighty dollar to be gained thereby; ready to canvass for anything that would sell. The consequence has been that the hives were sold, and those who purchased them were also sold. Thus any hive patented by intelligent and worthy bee-keepers has been looked upon with distrust. I know one man in Maine who bought 200 patent bee hives in 1872 to sell. They were nothing but trash, and he also took an agency for it. I think he has most of them stored away in the barn chamber now, and yet the market is flooded with bee hives of every description and size, which will (if used) involve the user in difficulties and loss. In order to make a good hive, a man must understand both bee-keeping and mechanism. It is strange to see how many are crying down the raising of dollar queens as unprofitable, both to raiser and consumer, and yet but very little is said about those who will flood the market with cheap, faulty and useless boxes called hives—cheating the poor mechanic out of his bread and butter and humbugging those who purchase them. My experience is: patronize good reliable men and obtain a good article, even though it costs a little more, and you will find yourselves doubly paid. In selecting a hive we should obtain one in which the bees will winter well on the summer stand and make us the most surplus honey, and which is easily handled. I have used the American, Langstroth, Kendall and Bay State bee hives, besides watching the results of the use of many others and below is the reasons for my thinking that the Bay State bee hive is the best for all purposes; it is neat, easily handled, and can obtain more surplus honey than any hive that I have ever seen. I can remove the frames while the bees are at work in the boxes without disturbing them. No honey board or other useless clap trap to interfere with removing the frames. There is no room for moths, every portion of the hive can be reached to clean it, and I can pack it so that it has no superior as a hive to winter or summer.

Keep your bees in a good hive, strong, and with a prolific Italian queen at all times and success is certain. I drum out the queen and bees in introducing, except where the frames remove easily. The bees here are gathering small quantities of honey now.

SILAS M. LOCKE.

Salem, Mass.

For the American Bee Journal.

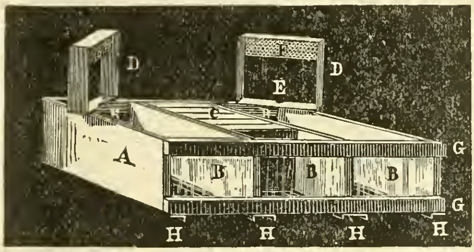
Our Plan for Getting Comb Honey.

The question is often asked, how to get bees to work in boxes? Ours have done all their storing in the racks or frames, and many of our stocks have but little in the brood chamber, and we shall be obliged to feed them after taking off the surplus or racks.

Last fall we went into winter quarters with 85 packed in straw and chaff; two died for want of sufficient stores, and two were robbed (one in Feb. and one in April; our apiary being on the farm, 3 miles from home, hence the successful robbing), leaving 81 to begin operations with in the spring.

Our aim being to get comb honey, even at the expense of increase, we managed after this wise: When a swarm came out we opened the hive (here is where one of the advantages of our rack comes in. We could remove the rack and surplus as easily as we could one honey box) where they came out, and taking out usually two cards of brood, giving them to nuclei stocks to build up with; cut out all of the queen cells; put in the place of the frames removed, frames with a strip of foundation; put on the rack and return the swarm, they kept right on storing surplus honey; in fact it was only stopping for an hour or two.

Gathering from basswood lasted only about a week; white clover failed soon after; since that time they have gathered but little more than they have used. We have increased to 130, and also have about 20 nucleus stocks for keeping extra queens. We have taken about 1800 lbs., and have racks on about 70 stocks, yet to come off. Our racks hold from 32 to 35 lbs. Many of our stocks have filled the second rack, and one filled the third. This is not as much as some have obtained in other localities, but it is much more than any of our neighboring bee-keepers have got, and is a large yield for the amount of gathering we have had this season.



RACK AND FRAMES FOR COMB HONEY.

Wishing to get our honey in the best possible shape for market, I set about devising a plan, and I send you a rack and set of frames, and you can describe them if you think best. They have proved highly satisfactory to us. Our honey has been stored in 1½ to 1¾ lb. cards; the frame weighing less than ½ oz.; the cards straight and fine as a rule. The racks will last as long as a hive; the frames cost about two mills each, before they are made up; any one can make a large number in a day. There are some of the manipulations in working them which we will describe at a future time, if others should wish to use them. The surplus room is so directly in connection with the brood chamber that they seem to store them in preference. Our hives are Langstroth size, 9 inches deep; the rack sits on the frames, a super sets over it.

SOUTHARD J. RAMSY.

Kalamazoo, Mich., Sept. 11, 1877.

[The rack and set of frames are at hand, and we will give a description, that our readers may judge correctly of them.

The rack, A, is ⅝ thick, 14¼x18½ in. outside. B. represents two strips of glass at either side, 3 in. wide. G, strips 1 in. wide and ⅜ in. thick, to hold the glass in place, as well as to hold the frame together. C and D, shows the frames or sections, each holding one comb; they are made of thin, berry-box material, and are 5x5¼ in. and 1¾ in. wide. F, shows comb foundation starters. H, shows sheet-iron rests for the "sections;" the edges being turned up as shown, form rests for the rack when on the frames over the brood chamber.—ED.]

For the American Bee Journal.

Feeding Bees and Feeders.

But little has been published of late in the JOURNAL about feeding bees. In our cold climate bees should be fed before the 20th of Sept. I commenced to feed mine as early as August 20th. Of course, it takes more food to winter a stock fed so early, but then it is better in the end as the hives will be more populous when winter sets in. Late feeding should not be practiced to any great extent. Stocks begin to grow less in numbers after the middle of Sept. Consequently, they do not cover so many combs and unless the food given them is sealed before cool weather sets in, it must remain unsealed all winter and will sour before spring. The bees will make no attempt to clean it up before warm weather in April. I am satisfied that unsealed honey is the direct cause of the death of many stocks of bees every winter. I don't like to use the extractor so late in the season as the month of October. Here our bees gather a very inferior quality of honey late in Sept. and every particle of it should be removed. I don't know that it causes dysentery, but then the bees must fly out as often as once a month, or die. My bees are now gathering this kind of honey.

FEEDERS.

I have lately used a feeder that is cheap, durable and very convenient, and answers the purpose to a charm. They can be adapted to any kind of a hive in use, and it requires but little ingenuity in any person to do it. I use the "Improved Mason" glass fruit jar which has a glass top. In place of this glass top or cap I use a piece of tin the same size of the top. A few holes are made in it with a brad awl. For slow, gradual feeding, make a few holes in the tin, but for rapid feeding make about 20 holes and a moderately large stock of bees will empty one in two hours. I use the pint size and find them as convenient as any. For the Langstroth hive they can be placed over one of the holes that connect the surplus boxes. The jars cost about 12 cents each by the single one, and probably not over 10 cents each, by the dozen. The principle is the same as in any nucleus feeder. I find that six pounds of coffee or granulated sugar and five pints of water make the syrup about the right consistency for fall feeding, and I think it should be boiled a few minutes for winter use. If half a pound of honey is added, the bees will like it all the better, as it will give the syrup a good flavor. Bees will winter as well on food prepared as above, as they will on the very best honey. I know this to be a fact as I have used it for 20 years. Here Mason jars can be had of all dealers in that kind of goods. Robber bees cannot get at the syrup even if the jar is placed on top of a hive where the bees in the hive can get at it. Try them and see if they are not the best feeders in use. H. ALLEY.

◆

From the Journal of Medicine of Algeria.

On Falsification of Honey.

BY D. P. JAILLARD, CHIEF PHARMACEUTIST OF THE MILITARY HOSPITAL OF ALGIERS.

Although the commercial value of honey has greatly diminished since the cane and beet sugars are cheap, its value is yet high enough to excite the cupidity of falsificators. Thus it is often found mixed with glucose or with gum, the presence of which is easily recognized by the help of simple reactions, related in detail by special treatises.

Aside from these adulterations, there is one which has not yet been exposed, which, frequent in Algeria, is rather difficult to unravel; and on which I have thought it important to attract the attention of the consumers. This adulteration is especialy practiced by the natives, whose cupidity renders them experts in the art of deceiving; it consists in adding to the honey a certain quantity of cassonade (brown sugar).

To recognize this fraudulent addition, the quantity of cane sugar added to the suspected honey must be determined, and as the pure honey never contains more than one-tenth of this sugar, the result of the analysis must be brought to this as maximum. Should the experiment indicate a larger proportion of it, it is reasonable to affirm that the excess at least, is produced by unlawful manipulators.

The operation is made with a proof liquor, which can be acted on by glucoses, but which remains insensible to the action of cane sugar. The preparation of it is very simple: Take tartaric acid 100 grammes; caustic potash, 200 gr.; crystalized sulphate of copper, 30 gr.; water enough for one litre. Dissolve on one side the potash and tartaric acid, on the other the sulphate of copper, mix the two together so as to form 1,000 cubic centimeters, 20 cubic centimeters of this liquid will combine with 0.095 of glucose, C_{12}, H_{14}, O_{14}. It is, however, better to ascertain its force by testing it with a mixture of sugars of known value.

The examination of honey is divided into two operations. In the first, weigh one grain of the substance to be examined, dissolve it in 100 cetimeters of distilled water, and see how much of this solution is necessary to combine 20 cubic centimeters of the proof liquor. Supposing that it takes 12.5 cubic centimeters, this proves that the solution contains 0.76 per cent. of glucose. In the second operation, take again one grain of honey and introduce it in a pouch with one decilitre of water and 20 drops of chlorydric acid, boil it for a few minutes, to bring the volume of it down to 100 centimeters, then determine how much of it is necessary to discolor 20 centimeters of the proof liquor.

Admitting that 9.5 cubic centimeters of it have been employed, this shows that the latter contains 1 per cent. of glucose per 100.

The difference obtained in the two experiments shows the quantity of cane sugar, since this difference is due to the change of this sugar, of which 0.0082 C_{12}, H_{11}, O_{11}, furnish 0.01 of glucose C_{12}, H_{14}, O_{14}.

By deducting 0.78 from 1.00 we find 0.24 which represent the weight of glucose, furnished by the cane sugar existing in a grain of honey, corresponding to 0.197 of sugar.

From the above, since a grain of honey never contains more than 0.1 of cane sugar, such honey as above represented, should be considered as containing 9.7 per cent. of sugar. C. DADANT, translator.

For the American Bee Journal.

My Report and Management.

I started last spring with 20 swarms; increased to 55, mostly by natural swarming. I have doubled up the light swarms, leaving me with 45 stands. I have taken over a ton of honey from them, 1500 ℔s in boxes and 500 ℔s of extracted. There has been so much prejudice against extracted honey that it has been dull sale. I have partially overcome this prejudice. I sold a few ¾ ℔ tumblers in Dowagiac at 15 cents each, not as a standard price but to induce the people to buy a pure article. I cannot supply the demand for my extracted honey at 15 per ℔ net or 20 cents cash for my ¾ ℔ tumblers. My bees are working in their boxes yet. I cover my boxes with old pieces of quilts or any old garment. This keeps the cool nights from driving them out of the boxes. I winter my bees on their summer stands by packing with cut straw and sawdust, half each, as follows: I take a board 6 inches wider and longer than my hive, (which is the Langstroth) bore an inch hole in each corner, one inch from the side and end. I have my side-board same length of bottom and 3 or 4 inches higher than my hive with cover on. I nail inch cleats on side-board one inch from the ends projecting one inch below, to fit holes in bottom board. The back end board is the same width of the sides and 2½ inches shorter than width of bottom board. I nail cleat in the center, inside, and bore a hole in bottom to fit. I set up sides and end and drive in 2 nails to hold together. I set the hive in even with front end, and tack a 4 inch strip up and down in front on each side, projecting into the hive. I set in front board, on the top of porch and even with the top; then pack with chaff or cut straw and sawdust. The cover is same width of the bottom, and one inch longer, and I nail a 3 inch strip around it. I leave this box around my hive till nearly swarming time; then take my boxes apart and pack them away, using the packing to mulch my fruit trees, also my strawberries and raspberries. In this way my bees can fly out at any time. I have no axe to grind with my new strain of bees, but have some young swarms that have filled their hives and filled twenty 6½ ℔ boxes this season. I have no bees to sell, except a few swarms to my neighbors.

Linn Apiary, Mich. R. A. CALVIN.

◆

Marathon, N. Y., Sept. 26, 1877.—"With us the weather is dry and the honey crop is cut short. The spring was dry and cool. Mid summer was a good honey season but short, and closed very suddenly. There is but very little buckwheat honey. Bees have been idle for some time. O. COURTNEY.

Notes and Queries,

CONDUCTED BY
PROF. A. J. COOK, LANSING, MICH.

Delhi, Ill., Aug. 27, 1877.—"Please inform me of the name of the enclosed plant or weed; it seems to be a very fine honey-producing plant. Bees work on it from early in the morning until late at night. It has been in bloom for about three weeks; it grows to the height of 8 or 9 feet."
H. D. EDWARDS.

The plant is the *scrofularia nodosa* or figwort. The flowers are most too minute to recommend it, nor is it common enough as a weed.

New York, Sept. 15, 1877.—"I wish you would publish what is known about *Apis Dorsata*. I once made a fruitless effort to import it. If it promises well, as the fruit culturists say, I hope the societies will unite in importing it. Bee-keepers have leisure at just the season to go for it."
E. PARMLY.

We know but little about the *Apis Dorsata*. Will our friends who know anything of it, favor us with a report concerning it?

Ottawa, Ill., Sept. 18, 1877.—"Please give the name of the enclosed plant. The two tied together I suppose are wild asters. Bees are and have been for last ten days working heartily on the yellow plant. The fourth plant (*Eupatorium* I suppose) is abundant near the river banks, and yields honey, as the bees up to 10th of this month were very busy on it. Have collected several quarts of seed from wild sweet clover; it is very fragrant, grows 6 to 8 feet high, flowers white about three inches long. The bees last week were on it by thousands. One crop of flowers is succeeded by the second, it must be a very valuable honey plant."
H. L. BRUSH.

The plants are: *Eupatorium*, or boneset; aster, two kinds and golden rod. All are excellent honey plants. Honey rather dark but excellent in flavor. I should like a little of the sweet clover seed.

Limerick, Ill., Sept. 20, 1877.—"I send a sprig of a plant that I would like to know the name of. It grows 4 to 5 feet high and from 3 to 4 feet across to tips of branches. At the base the stem is a full inch in diameter. It is dark red with little spots on it. The stem is rough and stout. At 8 to 10 inches high, it branches and re-branches, and looks almost like a well trimmed bush or low apple tree. It has pink blossoms. It blooms from about the 4th of July till frosts. It has a little down on it like a thistle; it is covered with bees all day long. We save the seed."
E. PICKUP.

This is *Cleome integrefolia* or Rocky Mountain bee-plant, one of the very best plants for honey, as it blossoms early, and persists through the season, thus bridging the drouth of July and August, and furnishes exquisite honey. It is too bad if it has no other use, though if any plant deserves to be planted just for honey, this does. It ranks with borage, tall Chinese mustard and Mignonette, as a honey plant.

Burlington, Kansas, Sept. 9, 1877.—"The past has been a poor season. The fruit blossoms gave no honey on account of the wet weather. Bees are doing well now on fall flowers. We shall get enough to winter on but no surplus. What is the name of the enclosed plant? What is the best location to carry on the business of bees and honey?"
J. F. HENDERSON.

It is a golden rod. There are many good locations in every State, and as good as any in your present State.

New Music.

DON'T PUT THE POOR WORKING-MAN DOWN!—This is the title of the greatest motto song ever published in America. Written and composed by Bobby Newcomb. Will be sung in almost every theatre in the land. Price 35 cents per copy. If you cannot get it from your regular music dealer, send to the publisher, F. W. HELMICK, No. 50 West 4th St., Cincinnati, O.

Let capital shake hands with labor.
Let the poor have the bread that they earn
For surely they need every penny.
Is a lesson quite easy to learn,
Remember the poor love their children,
So give them a smile, not a frown,
Live and let live, be your motto,
Oh! don't put the poor working-man down.

DEAR OLD HOMESTEAD.—Is the title of a very fine new song, by MISS ANNA C. HILTS. This song has taken a strong hold on the popular fancy. No doubt there are thousands who never forget the "Dear Old Homestead," where so many happy hours were spent in joyfulness and glee, during their childhood days. Price 40 oents, with splendid lithograph of a country homestead.

'Tis a place I shall ever remember,
Should I live to be fifty years old;
'Twas the home of us all in our childhood,
And we prize it, yes higher than gold.

Address all orders to F. W. Helmick, publisher, No. 50 West Fourth St., Cincinnati, Ohio.

☞ The Western Illinois B. K. Society will meet at Oquawka, Henderson Co., Ill., on Oct. 2 and 3, 1877. All bee-keepers and persons that are any way interested in bees or honey, are hereby respectfully invited to attend our convention, and have a good time in general. Bring with you anything you think will be of interest to bee-keepers, such as hives, bees, extractors or honey. Reduced rates will be given at hotels. Meeting will commence at 10 A. M. Come prepared to give your summer's work and profit.
HARDIN HAINES, *Sec.*

American Bee Journal.

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We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Remittances to be sent at our risk must be by Post-office Order, Registered Letter, Draft or Express (charges prepaid). Make Post-office Orders and Drafts payable to Thomas G. Newman & Son.

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

☞ Attention is called to the advertisement of ROPP'S COMMERCIAL CALCULATOR. It is in all respects what is claimed for it, and is a very valuable work.

Secure a Choice Queen.

We now renew our offer to send a choice tested Italian queen as a premium to any one will send us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be tested.

Honey Markets.

NEW YORK.—We quote as follows: West India honey in bond, per gal., 82@85c, free, $1.02@1.05; New Orleans, extracted, 1.02@1.05; basswood or white clover, extracted, 9@12c. ⅌ ℔; white clover, or basswood, in Isham, Hetherington, or Betsinger style of caps, single combs, neatly crated, 18@20c.; same honey, larger caps, 15@17c.; buckwheat, 10@12c.

BEESWAX.

No demand for export; the low prices that rule are no inducement to country holders to ship in their wax.

Exports since last report........20,963 "
" from Jan. 1st..............82,196 "
" same time last year.......47,406 "

H. K. & F. B. THURBER & Co.

CHICAGO. — Choice new comb honey, 15@18c. Extracted, choice white, 8@10c. Beeswax, 25@30.

CINCINNATI. — Quotations by C. F. Muth. Comb honey, in small boxes, 12½@15c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.75; per gross, $30.00. 2 ℔. jars, per doz., $5.00; per gross, $55.00.

SAN FRANCISCO. — Quotations by Stearns & Smith. White, in boxes and frames, 15@18c. Strained honey in good demand at 10@15c.; beeswax, 27@30c.

San Francisco, Sept. 9, 1877.—"Our market is about the same as last quotations. At this season of the year (during the grape and fruit season) the demand for honey is light. The new crop so far as received is of poor quality." STEARNS & SMITH.

A HINT TO BEGINNERS.—Those who may desire to read up in the literature of bee-keeping, are advised to obtain the first Volume of THE AMERICAN BEE JOURNAL. It is worth five times its price to any intending bee-keeper. It contains a full elucidation of scientific bee-keeping, including the best statement extant of the celebrated Dzierzon theory. These articles run through all the numbers, and are from the pen of the Baron of Berlepsch. We have but a few copies left; price, $1.25, in cloth boards, postpaid.

☞ Subscribers will please notice the date upon their subscription labels and see that they are "up with the times."

The American Bee Journal

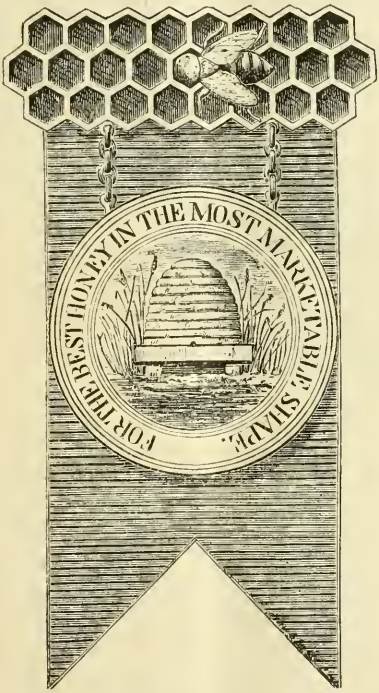
DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, NOVEMBER, 1877. NO. 11.

The Thurber Gold Medal.

It will be remembered that Messrs. H. K. & F. B. Thurber & Co. offered a handsome $50 Gold Medal in a satin case for the best exhibit of "honey in the most marketable shape." We append two cuts of this medal, showing each side with inscriptions.

FIG. 1.

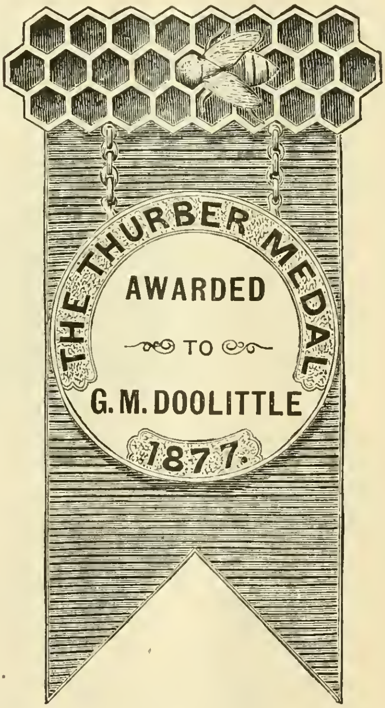

FOR THE BEST HONEY IN THE MOST MARKETABLE SHAPE.

On its face (fig. 1) are the words in enamel: "For the best honey in most marketable shape." The gold bar, to which is attached the pin, is made to represent a honey-comb, with a bee, of raised gold and enamel, settled upon the comb and busy at work. From the bar, suspended by two chains, hangs the medal proper, which is thicker than a silver dollar. In the centre is an old-fashioned straw hive in a garden, made of raised gold, upon a field of very bright gold, and around this are the words above quoted.

On the reverse (fig. 2) are the words: "The Thurber Medal, awarded to G. M. Doolittle, 1877," as seen in the cut.

The medal and case, the latter having a plate-glass top, was made for Messrs. Thurber & Co., by Schuyler, Hartman & Graham, of New York.

FIG. 2.



Messrs. Thurber selected as judges: Wm. Fletcher, Esq., a large and experienced honey dealer; A. J. King, editor of the *Bee Keepers' Magazine*, of New York, and Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, Chicago. Their written instructions were as follows:

"GENTLEMEN:—To promote the building of straight combs in neat style of caps, well filled and perfectly sealed cells, thorough gradation of varieties, and the uniform adoption of such size and shape crates as may be thought best adapted for all commercial purposes—do

we want to give the medal, and to your good opinion we entrust its disposal.
H. K. & F. B. THURBER & Co."

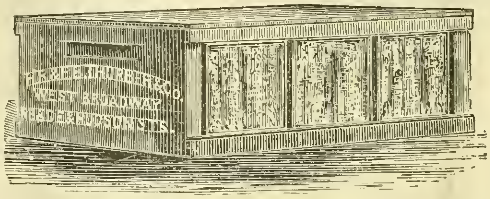
The Committee examined thoroughly every exhibit and weighed all the points enumerated in their instructions, and the following gives their decision:

"We the judges appointed to award the "Thurber Gold Medal" for "the best honey in the most marketable shape," having thoroughly examined every exhibit in the fine display, and weighed the points enumerated in our instructions, would report that while we prefer the crate for shipment used by Capt. J. E. Hetherington, it is our decision that the "best honey" is that exhibited by G. M. Doolittle; we also prefer the box used by the latter, and as the medal cannot be divided, we award it to G.M. Doolittle, on the merits of the two points out of the three enumerated."

WILLIAM FLETCHER,
THOS. G. NEWMAN, Judges.
A. J. KING,

The medal was forwarded to Mr. Doolittle, by express, by the Secretary of the Association, and the following acknowledgement has been received:

"Borodino, N. Y., Oct. 24, 1877.
FRIEND NEWMAN:—Your letter and the Gold Medal were duly received. It was a happy surprise indeed, as I was not anticipating the award. To Messrs. Thurber & Co., the donors, and to the judges who awarded this magnificent medal, allow me to express my sincere thanks. I shall ever cherish this beautiful "souvenir" for its pleasant memories, and when I look upon it, it will not only bring to mind the donors but also my "little pets" who earned it for me. I am sorry I could not attend the Convention, but pressing duties at home detained me. Again I thank you all. Yours respectfully,
G. M. DOOLITTLE."


H. K. & F. B. THURBER & CO.
WEST BROADWAY
READE & HUDSON STS.

CAPT. HETHERINGTON'S CRATE.

◆

A Deserved Tribute.

"Honor to whom honor is due," is ancient but wise counsel. Lest we should seem to do injustice to those who have so nobly come to the rescue of honey producers by *creating a demand* for honey, we must not fail to speak of the indefatigable exertions of Messrs. H. K. & F. B. Thurber & Co., of New York, and the manager of their honey department, Mr. W. M. Hoge.

These gentlemen did all in their power not only to make the late Convention a success, but also to have the display of honey and apicultural impliments worthy of the apiarists of the United States of America. From the Atlantic to the Pacific—from the lakes to the Gulf—all apiarists owe them a debt of gratitude for this, and in our feeble way we will here give them the first installment of the interest on that debt, by stating a few facts.

We visited their immense establishment while in New York, and were surprised to see what a vast *bee-hive* it was. Some idea may be gathered of its magnitude from the following facts. They do a business of $13,000,000 a year—$50,000 a day; it takes some 300 clerks to run the several departments. They own and occupy a whole block of buildings, some 7 stories high, including basements, and besides this they have some 25 other warehouses for storing goods, including a bonded warehouse for imported goods presided over by a custom house officer; and they keep 40 large trucks busy delivering goods. They have a bank, telegraph office, law department, and printing office all for their own use.

Their establishment is simply immense. After being almost boiled during one of the hot days in New York, looking over the establishment, friend Hoge took us into "the cooler," where they keep butter and other articles needing a cool place. As they have 500 tons of ice there, it was much too cool for us—nearly freezing up all our ideas—so we left that cool retreat for more a congenial clime.

In the honey department we saw 150,000 lbs. of comb honey and 800 barrels of extracted honey—but as they were shipping and receiving so continuously its appearance had changed considerably when we called the next day. They do a yearly business of $350,000 to $400,000 in honey, and are without doubt the largest honey dealers in the world.

◆

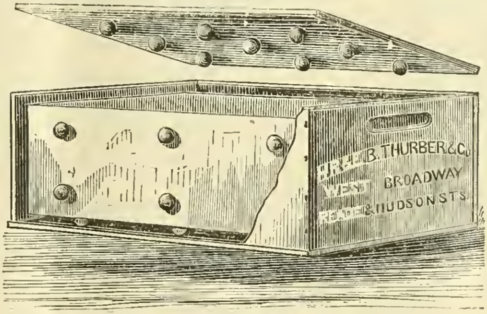
☞ Friend Bingham brought 3,000 pounds of excellent comb honey in boxes to this city by freight; not a comb was damaged, and but one small glass cracked. He disposed of it during a three-days' sojourn in the city—some for cash and some left on commission, but all at good figures.

American Institute Fair.

Among the many valuable and interesting exhibits at the Fair of the American Institute in New York, during the past month, the following will be engaging to our readers:

DISPLAY OF HONEY AND WAX.

A magnificent pillar, made by tiering up 3,000 lbs. of comb honey from the apiary of Capt. J. E. Hetherington, of Cherry Valley, N. Y. The pillar was surmounted by a display of 4,000 lbs. of beautiful yellow beeswax. This was exhibited by H. K. & F. B. Thurber & Co., who purchased his entire crop of 150,000 lbs., and paid him therefor nearly $30,000. Capt. Hetherington is one of the largest honey producers in the world, and withal a genial companion and a cultured gentleman. He uses a very convenient and cheaply made crate for his box honey, containing a dozen boxes of one comb each. His honey is mostly from white clover; the balance being from buckwheat and basswood.


B. THURBER & Co.
BROADWAY
& HUDSON STS.

HOGE'S COMB-HONEY CARRIER.

N. N. Betsinger, Marcellus, N. Y., had an excellent sample of honey, which was gathered from the teasel blossoms. He also exhibited some of the seed and stalks of this plant. Teasel is a plant which is used in taking off the nap from cloth. These blossoms make the whitest and best honey, commanding the highest prices. Mr. Betsinger's honey was nicely put up, but the sides were ornamented by "scolloped" blue paper, prepared for the purpose, for which he claimed a superiority, as it excluded the air from the honey in the box. This paper and his claim for it cost him the Thurber Gold Medal. It is claimed by honey dealers that such paper would become dirty with fly-specks, etc., and retailers would seriously object to handling it, for that reason. His crates hold 12 boxes, and are very substantial and convenient.

G. M. Doolittle, Borodino, N.Y., had also a fine display of the same kind of honey (from the teasel). His honey was put up in crates of two sizes—one containing 12 and the other 48 boxes. Mr. Doolittle, it seems has done *much*, having sold 20,000 lbs. of comb honey to Messrs. Thurber & Co. and took the Gold Medal! He has only six acres of land, but has cleared over $6,000 from his bees in five years, after paying all expenses! Is not that doing more than a *little?*

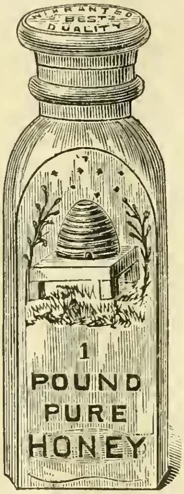
C. R. Isham, Peoria, N.Y., had a fine display of excellent white honey in his tin-cornered and glass-sided one-comb boxes. The three cases on exhibition he sold to Thurber & Co. for 25 cts. per pound—$90 in all, and one of them goes to England as a sample of the best American honey. He says he has sent tons of comb honey in these boxes by freight without loss by breakage. He now uses the same arrangement in sectional boxes, and glazes when filled.

E. D. Clark, Randallsville, N.Y., had an excellent exhibit of honey. His crates have a peculiarity—an auger hole through the bottom of the crate, under each box, through which they can be easily raised by the finger, overcoming a difficulty that is sometimes quite annoying to retailers.

J. E. Moore, Byron, N.Y., had also a

good display of both comb and extracted honey from clover and linden. It was of excellent quality.

C. F. Muth, Cincinnati, O., exhibited honey in his several styles of honey jars, and some honey cakes—in which honey was substituted for sugar. They were delicious, and will no doubt form a welcome addition to the bill of fare in many families.



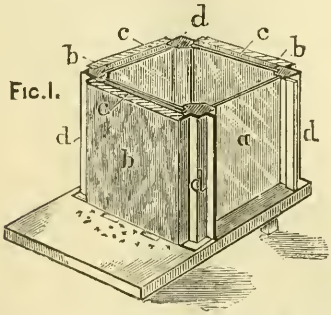
MUTH'S HONEY JAR.

There was also an excellent display of English honey in several kinds and shapes of jars, peculiar to that country, which attracted much attention.

BEES, LARVÆ, EGGS AND COMB.

Dr. Worrall had one of his Centennial Bee Hives on exhibition, containing a colony of Italian bees. As this hive has all glass sides, many of the "curious" ones spent considerable time watching the busy bees.

FIG. I.



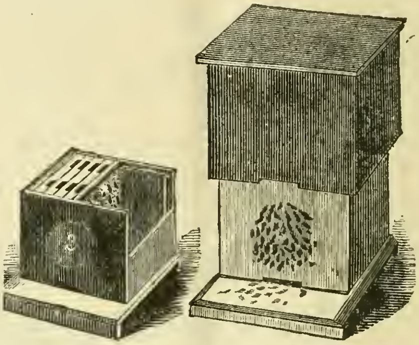
DR. WORRALL'S CENTENNIAL HIVE.

J. Hasbrouck, Flat Bush, L. I., exhibited a colony of Italian bees in an observatory hive.

Silas M. Locke, Salem, Mass., had an excellent nucleus colony of Italian bees, on exhibition.

Geo. Atkins exhibited a curious specimen of natural comb built in the form of a horse. This was of considerable interest, as it demonstrated that bees would work from a pattern.

R. Ferris, Belleville, N. J.—an exhibit of eggs, larvæ and nympha of Italian bees, also several specimens of worker combs.



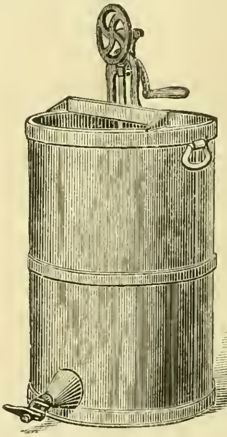
IMPROVED AMERICAN HIVE.

A. J. King, New York—several specimens of white and yellow comb foundation, framed and glazed.

J. H. Nellis, Canajoharrie, N. Y.—specimens of his new artificial comb foundation—drone size.

IMPLEMENTS FOR THE APIARY.

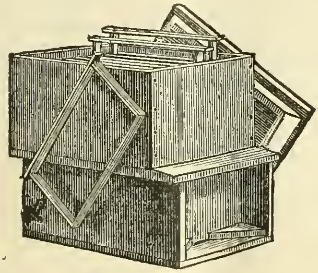
Dr. Worrall's Centennial Bee Hive (the only hive receiving the Centennial award). It is a complete double hive; the entire inside is glass, which is a non-conductor, covered by detachable wood sides, between which is a dead air space of over ½ inch, rendering the hive of uniform temperature in the hottest weather, enabling the bees to



MUTH'S HONEY EXTRACTOR.

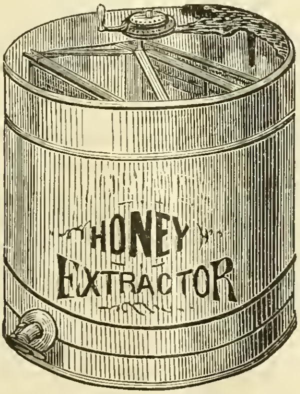
work comfortably instead of clustering out when honey is to be gathered, and thus much precious time is saved. This dead air space can be filled in winter with a quilt, felt, or other warm substance, enabling them to winter on summer stands.

Hoge's Comb Honey Carrier.—One of the greatest difficulties of handling comb honey is the manner in which some put it up for shipment to market. Much when received is in a broken-down condition. To obviate this, Mr. Hoge has invented a "carrier," which consists of a box having on the inside of the top, sides and bottom, a number of india rubber balls, against which the inside box, containing the honey-combs, strikes while traveling by railroad, wagon, or any other conveyance. This method keeps the combs steady in their places, and they may be sent all over the world without damage.



LANGSTROTH BEE-HIVE.

Shucks' Universal Bee Hive—is a large, two-story one, having 40 surplus boxes, 5½x5½x4 inches, arranged at the side and on top of its seven frames.

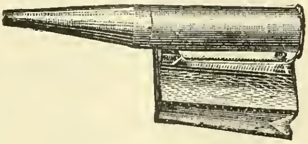


ALL-METAL EXTRACTOR.

N. N. Betsinger's Hive, which he calls the "Improved non-patent hive," and over it is a card stating that he was the first inventor of a sectional hive.

W. J. Andrews—Introducing cage and frame for fastening wax guides.

Thos. G. Newman & Son—Bingham and Quinby smokers, Peabody, Chapman, Novice, and Muth honey knives; Emerson's binder for the JOURNAL; Van Deusen bee-feeder; bee veil; 1 ℔. comb foundation; 1 and 2-℔. honey jars; queen registering slates, and a copy each of the Manuals for Bee-Keeping, Dzierzon Theory, and Centennial Essays on Wintering.

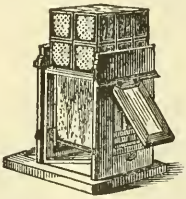


BINGHAM SMOKER.

Silas M. Locke—Model of the Bay State bee-hive, bee-feeder, fumigator, and nucleus feeder.

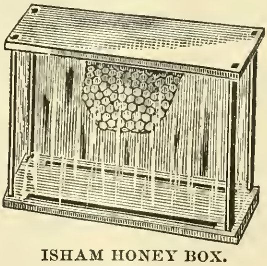
L. C. Root.—The Quinby hive with side and top boxes, and the Quinby smoker.

A. J. King had the following exhibit: Comb foundation machine; the American, Imperial, Eclectic, Improved-American, and Langstroth hives; all metal extractor; bee feeder; the new smoker.



AMERICAN HIVE.

J. H. Nellis—A sample showing a new way of fastening foundation in frames, viz., by turning up the edge ¼ inch, thus:], and then tacking on a small strip of pine, driving the brads through the strip and upper edge of the foundation into the top bar.



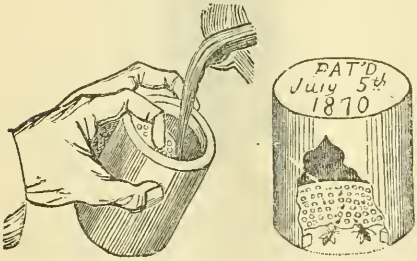
ISHAM HONEY BOX.

C. F. Muth—All-metal honey extractor, honey jars, Langstroth hives, and veils.

W. A. Schofield—a new, broad-bladed honey knife, with curved handle and point.

David Latchaw—his hive composed of frames merely, with close-fitting side bars; these are held together by a clamp reaching from one side-board to the other.

☞ We may have omitted to mention some exhibit, but if so, it is not intentional. We had but a short time to look at the display and that in the evening, as we were so much engaged with other duties. Being Secretary of the Association, serving on several committees, acting as one of the judges and awarding the Thurber Gold Medal, and looking after the interests of The Journal, kept our time fully occupied. When the Convention adjourned we found ourself quite exhausted, with a thousand miles of hard travel before us. We arrived home on Tuesday evening, with a severe cold and all the labor of getting out The Journal before us, including writing up the report of the Convention. If therefore any feel slighted, they should consider that we are but human. During our absence we made the acquaintance of a large number—memories of whom are pleasant; we trust our friendship will be as lasting and true as that which existed between David and Jonathan "in days of yore."



VAN DEUSEN FEEDERS.

☞ The Michigan State Convention will be held on the third Wednesday in December, at Adrian. Full particulars in our next issue.

☞ Now that the crops are harvested let every one who intends to keep bees scientifically turn attention to reading up the subject. No one should expect success without knowledge of the science.

Sweet Clover.—Friend Brush has sent us a sample of sweet clover seed, and remarks that it was planted near a sulphur spring some fifteen years ago, and has self-sown itself ever since. It is one of the best honey plants.

☞ At the Quebec Exhibition we notice that friend Thos. Valiquet received the first prizes for comb honey, honey in jars, and bee-hives. Also honorable mention for the whole of his exhibit.

☞ The article in our last issue on page 349 should have been signed Southard & Ranney. It was written rather blindly, and our printers got it Southard J. Ramsey.

☞ The Waukegan District Fair was largely attended, and we notice that Kraetzer Bros. & Stauber got a cash premium on the Concord Hive and the best exhibit of honey.

☞ Several large lots of honey were sold in this city during October. Don't be too fast, and the prices will keep up. They have *advanced* since our last issue and by using a little judgment we can keep them up.

☞ Five hundred millions of dollars will come to this country from Europe this season for our surplus products of the soil. This sum will go into the hands of producers and will, like a well of living water, spring up and revive "all the country round about."

☞ Our callers during the past month were numerous. Among the most notable were Joshua K. Millner, Esq., of Cherburg, Blackrock, England, who is on a tour in this country as a member of the English rifle team. He has gone to California and will call again on his return. He has quite a large apiary in England and looked through our museum of implements for the apiary with considerable interest.

Friends Burch, Bingham, Chapman, Sonne, and a host of others have also put in an appearance and spent a pleasant hour with us.

National Bee-Keepers' Association.

This Society met at Cooper's Institute on Tuesday, Oct. 16th. President W. J. Andrews in the chair; J. H. Nellis, Sec'y.

The following were appointed committee of arrangements: Capt. J. S. Hetherington, J. H. Nellis, A. J. King, T. G. Newman and S. M. Locke.

The President delivered his annual address as follows:

FELLOW BEE-KEEPERS:—Just one year ago we met in convention at Philadelphia. That meeting marks an era in our history—it being the Centennial year of American independence. That was my first meeting with you. I came into your midst an entire stranger. Without any solicitation on my part, and to my great astonishment I was taken completely by surprise in being chosen your presiding officer, an honor which I have never for a moment thought was intended for me personally, but to that section of the country from which I hailed. I accepted it as a tender of the olive branch of peace.

Soon after our separation at Philadelphia a national election was held, and as soon as the result was known in all the States, the question uppermost in the minds of our people was, "Who is to be our next president?" At one time it was seriously apprehended that the question would have to be decided by the sword—that our country would again be plunged into civil war—all eyes were on Congress. With breathless anxiety their meeting and action was awaited. They met and good counsel prevailed. From turmoil and threatenings of war came peace, and it is with feelings of profound pride that we have witnessed during the last year the efforts put forth by our people of all sections to renew those bonds of good fellowship that existed prior to that period that we were thrown into the terrible vortex and calamities of civil war. And it is my sincere prayer, as it should be of every true patriot and lover of his country, that we may all continue to cultivate those reciprocal feelings, until all our people, whether they be of the North or of the South, of the East or of the West, may have that fraternal feeling one for the other which I know exists among bee-keepers. Could I give utterance to a stronger wish for the good and welfare of our whole country?

I know of no class of any calling, profession or avocation among whom a more friendly and fraternal feeling exists than among bee-keepers. I have had the pleasure of making the acquaintance and mingling with a number of my fellow bee-keepers of every section of our country,—many of whom differed with me both religiously and politically—yet our social relations were the very kindest; in fact, I think I am fully justified and warranted in saying:—point out to me a bee-keeper, one who loves the pursuit and takes an interest in it, and I will show you a man of benevolence and generous impulses, one whose latch-string to his mansion is on the outside, one ready and more than willing to extend to you the hospitalities of his home; one ever ready to greet you with the cordial grip of friendship.

One of the principal subjects that will be before us at this meeting will be, the best means of promoting the interest of this Society and placing it on a sure foundation. I am sure that no one who properly appreciates the benefits derived alone in producing a closer bond of union will for a moment entertain the idea of disbanding. It is to be hoped that some plan will be suggested and adopted that will yet draw us still closer together and "forge the links of brotherhood and good fellowship." I have given the subject much thought and consideration and have had considerable correspondence with a number of our members. It occurs to me that this might be best accomplished by the formation of local county societies with State heads, and acting as auxilaries to this society. One of the chief drawbacks to our success is the expense in reaching the place of meeting. With these county and state societies as auxiliaries and a beneficiary system in connection therewith, this objection would be overcome and there would be a pecuniary incentive for sending delegates to our meetings. The adoption of such a system I think, too, would prove a great benefit to each individual. Soon after my return home from Philadelphia last year I opened a correspondence with several of our members, and advanced this idea to them. All those with whom I corresponded thought favorably of it. I then wrote out and had published in two of the bee papers setting forth my views fully on the subject, which no doubt you have all read, and it is therefore unnecessary for me to repeat them here.

That great good has resulted from our and similar local organizations cannot be doubted. It is but a short time in the past and within the recollection of the most of us that the only mode of keeping bees was in the old log gum and common box hives. Langstroth invented the movable-frame hive, and a few adopted it. Then local organizations began to spring into existence and these soon culminated in the organization of this Society. At its very first session one of the leading topics was the adoption of a uniform standard frame,—no conclusion, however, was arrived at, yet the matter was thus called to the attention of bee-keepers generally; and now by common consent the Langstroth frame has come almost into universal use. This we are glad of for two reasons, *first*, because it shows a just and proper appreciation for the genius of its inventor, and, *secondly*, the attainment of the desired end—a universal frame.

Not only has this been accomplished, but we have witnessed the introduction of the Italian bee, which is now universally admitted to be far superior to our native blacks; and then, too, we have had the invention of the extractor, an implement which has proven itself an indispensible one in the hands of all who have given it a trial; and very recently comb foundation and machinery for its manufacture have been introduced. These foundations have been sufficiently tested to prove them a success, and are rapidly coming into general use.

There yet remains one great desideratum to be accomplished by our Northern brethren—one which is of no moment with us of the South—wintering; and may I not add that this, too, is about to be, if not already, accomplished in chaff. Now we do not wish to be understood as claiming that all this is the result of organization, but we do claim that it has been an incentive to it,and a wider knowledge of them diffuse through these means. It is true that they have all been heralded forth by the different bee papers—they, too, are great helpers in diffusing knowledge, and I wish that every bee-keeper throughout the land were subscribers and readers of our bee papers, but we all know that many are not and probably never will be. When we meet in convention our proceedings are usually published in the political papers and copied into agricultural ones, and through these means reach the eyes of many who would otherwise know nothing of them. A knowledge is also imparted to many by those of us who do attend.

In conclusion let me add that I am in hopes that peace and harmony will prevail during our deliberations, and that when we come to separate that we will have no cause to regret our meeting together, but on the contrary we will part better friends than when we met.

The following essay by G. M. Doolittle was then read:

Increase and Prevention of Increase.

It has been intimated by some that Doolittle did not try new experiments, or in other words, was not a friend to real progress.

Now, this is not so; for we experiment on everything that looks at all like a success, and so should any apiarist that expects to realize the most profit from his bees; for there are in these days strong hints dropped in all our bee papers, that if followed up might prove of real value. Still, however much we may experiment, no one should be foolish enough to devote his whole apiary to experiments, no matter how feasible some new plan may look, but a certain part of the apiary should be set off for just these experiments, and the rest worked in the way known to produce good results. When we have proven, with a few stocks, that some new mode of management has advantages over the old, it is soon enough to devote our whole apiary to it. A noted bee-keeper once changed (or tried to change) all his queens in the month of June, to prevent increase, upon the plan given by Mrs. Tupper; that a young, laying queen would not lead out a swarm the same year, but the experiment cost him nearly his whole honey crop.

Another buried his whole apiary in manure heaps and came near losing the whole. We could quote numerous failures of like character; but these two will suffice to put the readers of the JOURNAL on their guard against experiments with a whole bee-yard. It should also be borne in mind that localities differ, and that what holds good with one may not with another. We know of no better advice than that given by one of old: "Prove all things, and hold fast that which is good."

We have numerous inquiries as to how the swarming fever may be controlled. To try to prevent all first swarms disposed to issue previous to ten days before your honey harvest commences will result only in vexations and loss of honey, where we work for box honey; and we doubt if any mode of artificial swarms, up to this time, can be made to pay so well as to let them issue naturally. Therefore we say let all first swarms that come ten or more days before your honey harvest commences, be hived in a new hive, and as soon as the hive is two-thirds full of comb, put on boxes; or if you can furnish them with empty comb put the boxes on at once. Prevent all after swarms by some of the various modes given, and as soon as the young queens get to laying they will go to work in the boxes and generally make more box honey than the new swarm. What have not swarmed ten days before the honey harvest is to commence, may be made artificially, if we desire increase upon the plan given by Mrs. Tupper; namely, shake all the bees and queen from a populous colony into an empty hive, placed where the old one stood, and put on boxes as before directed. Move another populous colony to a new stand and place a hive filled with the combs full of brood that you have just shaken the bees from, in its place, giving them a laying queen, and the old bees returning from the field make up the colony. Thus it will be seen we make one new stock from two old ones, and they are all in the best possible condition to make box honey.

PREVENTION OF INCREASE.

It is expected that all apiarists will clip all queens wings as soon as they get to laying, thereby saving all loss of swarms by flight to the woods, and all uniting of two or more swarms. If we have decided that prevention of increase will be more profitable than increase (according to the time our honey harvest commences) when a swarm issues, we catch the queen as she is found running round in front of the hive trying to follow the swarm, and place her in a wire-cloth cage, spread the combs a little in the centre of the hive and by means of a wire attached to the cage, suspend it in the centre of the hive, and the bees will soon return. You will want to be a little spry about this operation or the bees may miss their queen and return before you get through, and in that case you will have a job to close the hive without killing lots of bees. In five days open the hive and cut out all queen cells that are sealed, then wait five days more and cut them all off again, liberate the queen and the bees will go to work in the boxes with a will that will surprise you. In cutting out the queen cells each time, you will want to shake the bees off the combs or you may miss some of them. Still later when the caging of the queen would come right in the honey harvest, thereby causing too great a loss of honey, as with us bees will not half work in boxes without a laying queen.

Swarming can generally be controlled by extracting the honey from the brood combs and cutting off all cells the evening after a swarm has issued and been returned. If they are satisfied with swarming out and having their honey extracted (which they generally are) they will go to work in the boxes with a will. However, if none are seen at work in the boxes, but are lounging idly there, they will swarm again in a few days and you will have to repeat the operation. In the midst of the honey harvest another and a very good plan is to watch your opportunity and when two or three swarms come out so as to cluster together, hang one of the caged queens with them till they get settled, and then hive them the same as any swarm, putting on the boxes at once. Let the queens you do not use go back in their own hives.

The old stocks where the queens have been put back will do better than they would if they had retained the bees and kept up the swarming fever, while the large swarm will fill its hive and boxes in a very short time. We had one such swarm to complete 65 lbs. of splendid box honey in 13 days this season. Of course the stock that furnished queen for the large swarm will do but little more than get ready for winter.

The committee of arrangements reported the following order of business.

1. Marketing Honey—discussion opened by Prof. A. J. Cook, Lansing, Mich.
2. Use of Comb Foundation—discussion opened by Capt. J. E. Hetherington, Cherry Valley, N.Y.
3. Organization and its Relation to the Sale of Honey—opened by T. G. Newman, Chicago, Ill.
4. Rearing Italian Bees—discussion opened by M. Metcalf, Battle Creek, Mich.
5. Introducing Queens—discussion opened by S. M. Locke, Salem, Mass.
6. Is it detrimental to have the Brood chamber full of honey for wintering—discussion opened by N. N. Betsinger, Marcellus Falls, N. Y.
7. Importing other Races of Bees—discussion opened by Dr. Parmly, N. Y.
8. Management of the Apiary, by J. Hasbrouck, Flat Bush, L. I.

An election of officers for the ensuing year was then had, with the following result: President, J. H. Nellis, Canajoharrie, N.Y.; Vice-President, W. J. Andrews, of Columbia, Tenn.; Secretary, T. G. Newman, Chicago, Ill.; Treasurer, A. J. King, New York.

The constitution was read and amended, so that only one Vice-President and one Secretary were to be elected.

A committee of five were appointed to consider the best means of promoting the interests of the National Bee-Keepers' Society, and to increase its usefulness. The committee was as follows: W. J. Andrews, Thos. G. Newman, A. J. King, Capt. J. E. Hetherington and E. D. Clark.

Those wishing to add their names to the roll of members were requested to report to the Secretary. During the meeting 41 were enrolled.

SECOND DAY.

The Association met at 10 a. m., President Nellis in the chair. After the call of the roll, and the reading of the minutes of the previous day, the Secretary read the following telegram:

"To J. H. Nellis, Esq.

"In behalf of the Michigan Bee-Keepers' Association we send greetings and best wishes to the National Association in convention assembled."

Herbert A. Burch,
Sec. Mich. B. K. Association.

L. C. Root remarked that as the Michigan B. K. Association was one of the oldest and best State organizations in the country it was highly gratifying to thus receive their congratulations and assurances of co-operation. He moved that the matter be spread upon the minutes. Carried unanimously.

A letter was also received from W. S. Boyd, Hamilton, O., secretary of the S. W. Ohio Association, giving the following details of its organization and membership:

"At present we have 31 members enrolled. Any one can become a member by signing the constitution, and our expenses are kept up by donations at each meeting.

"Our meetings are held on the second Saturdays of Feb., May, and Sept.

"Our officers for the year are: Pres., J. T. Mardis, Lebannon, O.; Vice-Pres., J. C. Phillips, West Chester, O.; Sec'y, W. S. Boyd, Hamilton, O.; Treas., R. Lackey, Ridgeville, O.

"Wishing you a pleasant time at your meeting. W. S. Boyd, Sec."

The following essay by Prof. A. J. Cook was then read:

Marketing Honey.

It is needless here, and before this audience, to speak of the advantages of apiculture. You all know full well the real pleasure, and wholesome influence of an occupation, which brings its votaries face to face with Nature at every turn; and thus keeps ever before them, Nature's matchless system and her constant exhibition of marvels. Cast about you for a single instance, where intelligent apiculture and enthusiasm are not synonyms, and see how vain will be the quest.

But it is well sometimes—yea, often—to flee the sunshine of our business and scan the clouds, that we may the better know their promise of evil, and see if, perchance, we may not even cause the sunshine to disperse them.

I think the most of us feel that the portentious cloud of the past few years—disasterous wintering—has already ceased to alarm the best informed of our art; for already the sunshine of knowledge based on wise experience and accurate observation, has dissolved that cloud once so black and threatening.

So with the little labor attending our pursuit, the superior attractions which crowd about it, and the generous profits which ever wait upon its intelligent practice, we may well mind us of another peril: a business so crowded with patrons, that the supply of its products exceed the demand and we be brought to face the difficulty of markets glutted. If I mistake not this is *the one threatening evil that now confronts us.* Already some of our most able, experienced and successful apiarists—those wary, farseeing ones, who scent the battle from afar—have sounded the alarm. Already the cry has gone forth, that if only prompted by self-defense, we must deter, rather than encourage others to engage in this pursuit. One of the most intelligent and enterprising of Michigan's apiarists, sees in this danger, the breakers on which our business is to be ship-wrecked.

Ever since the memorable winter of 1871 and '72 when destruction stalked through nearly all our northern apiaries, I have spared no pains, that by close study and careful observation. I might discover the spring of that startling evil; so too, since the autumn of 1873, when at one of our State Society meetings my esteemed friend, Mr. James Heddon, said to me that the market was the thing to look to, if bee-keepers wished to keep above water; I have been carefully taking notes to see if perchance I might not ascertain the proportions of this real or imagined danger. During the autumn of 1876, I received so many gloomy letters on this topic, with such vivid illustrations as the deluge from California and our own repleted markets, that I must say, my own usually stable knees began to show nervous symptoms, and so for the past year I have been studying and experimenting even with more care, that I might be assured whether these forebodings were real or groundless.

Let us give brief attention then, to the question of "Marketing Honey." I am the more ready to discuss this, as the points here set forth must needs strike against the facts gained by the wide and varied experience of my brother apiarists here present, who so well and fully represent the apiarian intelligence of our country, and will thus be criticised so that we shall be able, very likely, to glean the real facts, if not here set forth, especially as we shall have the further benefit of the opinions of our best informed dealers.

Of course all here are too well informed to suppose that we can avoid the unchanging law of supply and demand. If honey production continues to increase as it has of late, and the demand remains stationary, of course there must be a rapid decline in prices.

That a pursuit so enjoyable, involving so little labor and so profitable as it is, even at the reduced rates of 1876, will not continue to win patrons, we have no reason to believe or affirm. We must then conclude that the demand must be increased, or else the price will surely continue to decline. Hence, we have only to conclude which horn of this dilemma, candor will impel us to take.

Is it true then, that our honey market is now at its maximum, or on the other hand is it capable of easy stimulation?

I believe and think I can show, that not a tithe of the honey is consumed in the United States that should or might be.

I need not show here that sugar in some form, either crystalyzed, or in form of syrup or honey, is a necessary food element. The fact of placental sugar in the blood of the mammalian fetus; of liver sugar in the blood of the more mature fetus, and carnivorous animals; the presence of sugar in milk, the typical food as given by Nature herself; and our positive need of sugar or food which is soon converted into sugar, as a *sine qua non* of health, or even life, as has been repeatedly demonstrated by physiologists; *all* prove the great importance of sugar as an aliment.

But it has been shown by chemists that syrups are so adulterated as to be very expensive, even when very cheap and that not infrequently are even poisonous, and extremely unsafe as articles of food. For evidence on this point, I would refer you to a paper by my able and distinguished colleague, Dr. R. C. Kedzie, to be found in the 1874 Report of the Michigan State Board of Health, pages 75 to 79. Sugar too is often adulterated, and thus expensive, even if it would be eaten in sufficient quantities to meet the demand of our bodies which is not probable. We see then, that honey, as a form of sugar which we may know to be genuine and reliable, is a real desideratum as an article of food. If, then, the honey producers can take measures to increase the consumption of honey, they are assuredly acting the part of public benefactors, as they are doing that which shall directly conserve the public health.

But it is with commercial syrups that honey must and will ever be in most active competition; but it is easy to show by a few simple experiments, that most of our commercial syrups, if not really poisonous, are so contaminated with filth as to be revolting. To bring then to our neighbor's lips the pure, wholesome, delicious nectar, right from the hive, is certainly a good work, whether he realizes it or no.

But is it possible to stimulate this demand? 1. Is the public attention directed to the merits of honey as an article of diet? 2. When its merits are known, is it always easy to procure it? 3. Is it possible to create a taste for honey, where none now exists? 4. What is the policy in the premises?

Let us proceed to consider these points in order.

1st. Is the public attention directed to the merits of honey as an article of food.

President Abbott of our College tells me that in Switzerland it is the rare exception to sit down to a meal at which honey is not served. I have never seen honey on a hotel table in the United States, though I have traveled in more than half the States, and from the Atlantic to the Pacific.

Again, is honey to be found even in a small fraction of the groceries of our country in its various forms of comb and extracted, ever ready to invite attention and solicit purchases; and even when present, is it where people will see it and be attracted, or is it quite as often put out of sight, and almost forgotten by the grocer himself?

Again, granting it a good position, it is so skillfully labelled or placarded, that it will demand attention? My observation—and may I not add yours also—gives an emphatic "no" to all these questions.

2dly. When people are fond of honey, can they always gratify their desires? Surely not till every grocery and provision store in the land keeps it constantly on hand. But I believe the majority do not. Thus if there exists a taste and longing for this most luscious of sweets, they can not be satisfied.

Only last week I visited a city of some 6,000 inhabitants, and learned incidentally that only one of nearly a score of grocers, had had any honey for months, and even he only a small lot and that very inferior. I then took pains to inquire of several if they would take some, both in comb and extracted, when every one said, send it on at once, at your own price.

Thus in this city, of the many who desire honey, how few can be gratified. This is only an extreme example of what is common in every State in the Union.

3dly. Is it possible to stimulate a taste for honey and thus create a market where none now exists?

No enterprising honey producer can doubt this. If we would keep all the grocers in our respective vicinities constantly supplied with honey, whose color or flavor, could but give it general recommendation, would keep this in such position, style and shape, as to claim the attention and win the admiration of all who see it; keep it in such small jars, or if comb, in such small frames or boxes as to be in easy reach of every pocket; and last, never give it a possible chance to leak out and besmear the counter and floor and thus disgust the dealer, we would very soon be surprised at the amount consumed in our own immediate neighborhood.

By examining my sales here, at the Agricultural College, I find, at the lowest estimate, that by taking proper pains to stimulate, and attract custom, a community of 300 persons will take the proceeds of at least ten colonies of bees. Thus we see if we would give more heed to our markets and marketing, our apiaries might be vastly increased in size and numbers, and still the markets would be unclogged and prices firm.

In Lansing there is a population of about 8,000. There are about 25 groceries. One of these and that about an average one, as to the wealth and standing of its patrons, has been supplied with honey from the apiary or Mrs. L. B. Baker—well may we of the sterner sex, take lessons of our apiarian sisters in the preparation of honey for market, —which numbered at the commencement of the season 18 colonies, and yet though we have had a fair honey season, and though Mrs. B. knows how, and gives all needed attention to secure the best yield of honey, this apiary has not been able to supply this one grocery during the honey season and I have been called to the rescue. Hence, we conclude that Lansing should and might give generous custom to 25 such apiaries, just during the honey season. In winter much more honey is consumed than in summer. Hence, we see that even a small town may be led to consume the honey product of near a thousand colonies of bees. This fondness too, like any taste or passion would grow by what it fed upon, so the demand would even go on increasing.

Thus we come to our fourth and last point, What is our policy in the premises?

First we should see that every grocer about us had constantly on hand a supply of honey, both comb and extracted.

Secondly, this should not only be properly graded, but should *always* be in inviting form.

If comb honey, it should look neat, be so built that it would all show, and in one or two pound boxes or frames, so that all could buy. If made in small frames, about six inches square, these held in the larger frames, which are like the common brood frames, except that they are two inches deep—and beyond question, this puts our honey in the most inviting form and secures the most, if we seek comb honey—then tins should be nailed on to the large frames, separating the spaces to receive comb, so that contiguous combs will not be fastened together and thus soil the honey and box.

The box made to contain these frames while awaiting purchase in the grocery, should be like a new-idea hive, with a perfectly tight bottom, so that should the combs leak, the box will not allow any dripping. This box should be made neatly, nicely painted, and with a hinged cover with straps like a trunk, so that it may be opened easily in removing honey. At one end there should be glass so all who come in will see the beautiful comb for themselves.

On the top of the lid should be a label, neatly printed, in large letters giving grade and kind of honey and in *very large* letters, the name of the apiary, so that the prestige obtained by all this pains, shall come to the rightful owner.

The labels must be made adjustable, so that they may be changed with the grade and kind of honey.

Extracted honey *should be extracted.* Let us not confess an inferiority, which we do not feel by inserting a piece of comb, but trust our extracted honey on its own merits, which are truly ample to commend it to public favor. It should be put in small glass receptacles, so that each cup may be sold at the most for 25 cents. It should be delivered in small quantities so that it will not granulate on the grocer's hands; or else he should be told all about granulation, and the way to again liquify the honey. A large neat label framed and under glass should call attention to the quality and kind of honey; to its extraction and to the apiary from whence it came. The cups I think had better be jelly cups. The size is favorable, and they help sell the honey, as they are always in demand and the buyer thinks he gets these thrown in.

The delivering of honey, and filling of cups, if the labor of the apiarist himself, will be more likely to be done "decently and in order."

But, do you say, this involves *so* much trouble. Yes, but it is just the trouble that pays a tremendous per cent. Just the trouble that will fill this slough of despond in regard to our markets.

But may we not exaggerate the trouble? In this way we can secure a market for all our produce in one village or city near by, and at good prices. Except in May and June we can easily get away for a day each month and in a single day re-stock all the groceries to be supplied, and see to it ourselves. In winter we can arrange to supply other dealers as our production may demand, though from my own experience I judge that very soon the seeking on our part, will be in the passive voice.

A further advantage, in sooth, will come with the prestige that is sure to grow out of such care and pains, so that if *any one* finds a market it will be sure to be ourselves. While the indirect advantage arising from the bettered methods of preparing honey for market, generally adopted, because of our example, thus toning up the whole business, will be by no means inconsiderable.

Let us then study the art of neatness; let our products be their own solicitors; let every grocery in the land be constantly supplied with honey so prepared, that its very style will make it irresistible. Do all this and I fully believe that we shall scatter the threatening clouds of glutted markets, by the golden sunshine of—bring us more.

A vote of thanks was passed to Prof. Cook for his very able and interesting essay.

Mr. Trimble said he was a consumer, and had seen the excellent display at the American Institute, and wanted to see more like it all over the country. He found it difficult to procure good honey, and thought this display and convention would do much towards bringing honey into more general demand. If honey was put up in such attractive shape as he had seen it there, and as recommended by the essay just read, there would be no trouble in finding ready sale for all that could be produced.

L. C. Root was glad that we had the presence and views of consumers. Such were just what we needed. In putting our honey in proper shape for the market we should consult their desires and wants.

J. F. Callbreath said he had marketed honey—both buckwheat and dark—and the grocer to whom he sold it, had disposed of it in his presence for double the price he received, and thought it best to sell his honey at retail and thus save such profits obtained by middlemen.

L. C. Root called attention to one thought expressed in the essay that he considered misleading. It was there stated that but "little labor" was necessary to success. Where parties made it an exclusive business, they found "much labor" more like the correct idea. He had labored in many callings but bee-keeping had given him more fatiguing labor than any other. He read an item in the Utica *Herald* stating that $100,000 had been made at the business, which was untrue. This "little labor" and "large profits" idea had ruined many. It had been stated that the business was just the thing for feeble and broken-down persons; that they could keep 100 colonies, and the like; but his experience proved that 9 out of 10 of such persons failed in the business. It required energy and labor, and bee-keepers earned every dollar they got. He thought that dealers and the public should understand more about marketing honey as well as bee-keepers. They usually refused granulated honey, though it was the best test that could be applied to know that it is pure. They should be informed that if put into warm water it will be brought back to its liquid state, and that when they bought it in that state they might know it was pure. Another thought in the essay was excellent—that of attending personally to the placing of the honey upon the market, and of obtaining the most desirable package. Under no circumstance should an inferior cup or jar be used to put up extracted honey. Take some standard jar that can be used for other purposes and it helps to sell the honey. He thought there was no end to the amount that could be sold if put upon the market in an attractive shape.

S. M. Locke.—The best packed fruit always sold the best, and the best honey in the best shape for market will always sell the best. Much honey is sent out in poor shape and hence is unsalable, but when put up in good shape all can easily be sold that can be produced.

J. H. Nellis said that he put up his honey in small packages and found that if attractive such always sold the most rapidly. Wherever there are 25 or 30 bee-keepers they should organize a society, and then act together and sell honey to only one or two groceries, and in that way cut off rivalry and groceries running one another at their expense. They should appoint a committee who would make a point of putting it up in good shape and pushing its sale.

C. R. Isham.—Over production is only a bug bear. It is no trouble to sell all the honey that can be produced, if in marketable shape. Our large honey producers sell all they can raise, and at good figures, too.

Dr. Walter.—Home markets were the thing, in his experience. He could always get 5 cts. per ℔. more at home, than honey was sold at, that was shipped to his neighborhood from other places. He sold all he could raise at 30c. per ℔.

C. R. Isham.—Honey is now an article of commerce and large crops must be sold to wholesale men in large cities, who are better prepared to handle it than producers.

N. D. West said he believed in selling to one house, so that there should be no running the price down.

A. J. King.—A large foreign demand had sprung up, and honey was now being exported in large quantities, and we must also study the best shape to put it up for that purpose. C. F. Muth, Cincinnati, also sold basswood honey largely to factories where sugar was used before, also to brewers. As to adulteration, he believed that was all in the past when honey was high. It was now too cheap to pay for adulterating. One good test was to subject honey to the cold 20° below zero, and if pure it will granulate; if it does not granulate it is impure.

Mr. W. M. Hoge being asked to express his views, spoke as follows on the subject of

Honey Dealers.

MR. PRESIDENT, LADIES & GENTLEMEN:

Next to the business of the aparist comes that of the honey dealer. If properly protected and encouraged it would contribute the most to the production of honey. It would support the trade of the bee keeper in the same manner as the wholesale dealer supports that of the manufacturer. The wholesale dealer, by affording a ready market to the manufacturer by taking his goods off his hands as fast as he can make them. and by sometimes even advancing their price to him before he has made them, enables him to keep his whole capital, and sometimes even more than his whole capital constantly employed in manufacturing, and consequently to manufacture a much greater quantity of goods than if he was obliged to dispose of them himself to immediate consumers, or even to retailers. As the capital of the wholesale merchant, too, is generally sufficient to replace that of many manufacturers, this intercourse between him and them interests the owner of a large capital to support the owners of a great number of small ones, and to assist them in their losses and misfortunes, which might otherwise prove ruinous to them. An intercourse of the same kind universally established between the honey producers and honey merchants would be attended with effects equally beneficial to the bee-keepers. They would be enabled to keep their whole capital, and even more than their whole capital, constantly employed in the cultivation of their bees. In case of any of these accidents, to which no trade is more liable than theirs, they would find their ordinary customer the sound honey merchant, a person who had both an interest to support them and the ability to do it. Were it possible, as perhaps it is not, to establish this intercourse universally and all at once—were it possible to turn all at once the whole capital of all the bee men to its proper business, the production of honey, withdrawing it from every other employment into which any part of it may be at present diverted, and were it possible, in order to support and assist upon occasions the operations of this great stock to provide all at once with another stock almost equally as great, it is not perhaps very easy to imagine how great, how extensive, and how sudden would be the improvement which this change of circumstances would alone produce upon the whole face of the country.

The zeal and energy of the dealer, though in its own nature altogether unproductive, yet contributes in this manner indirectly to increase the amount of honey produced. It increases the productive powers of productive labor by leaving it at liberty to confine itself to its proper employment—attention to the bees; and the combs are thus built straighter and bees winter better, by means of the labor of the man whose business is most remote from the hive.

Regarding the exportation of honey, I have found it not only feasible, but profitable. Germany, Austria and Russia, take from this country large quantities of strained and extracted honey; in fact this class of customers take about all the honey received at our ports from Cuba, San Domingo, Mexico and South America. This honey is generally bought and sold in bond at about 85c. per gallon, gold, our government duty is 20c. gold per gallon, and as the freight to Hamburg is only about 2½c. per gallon by sail, we are able to deliver West India or South American honey to our German patrons, (who have no duty to pay) fully 20c. per gallon, currency, less than we can deliver the same honey to our next door neighbor. This class of honey is used principally by foreign brewers, who recognize the important fact that honey contains more saccharine and dextrine than any other substance, and is therefore considered at 85 to 90c. per gallon as the best and cheapest substitute for malt known. Cane sugars contain albuminous principles, and are therefore considered impure from a brewer's point of view. Extracted honey and comb honey, in our neat little American surplus boxes and crates, have been introduced into England and France to a limited extent, and there is no doubt that by cultivation, these countries will become our best customers, because the superiority of our honey is universally acknowledged.

Adulteration, which has invaded every branch of commerce, is in many instances practiced in obedience to the wishes and tastes of the public, as in the practice of coloring cheese and butter with annatto, potted meats, and fish with bole armenian, peas and pickles with copper, sugar confectionery with various pigments, and cooked corned-beef with salt peter. Ever since the earliest days of the AMERICAN BEE JOURNAL, *bee-keepers* themselves have asked the question through its columns how to prevent honey from candying. Dealers and consumers also have shown such a preference for translucent honey that often, notwithstanding the assurances that crystalization was an indication of its purity, candied honey has proved a dead investment on the hands of retailers. Thus it is to meet what seems to be an imperative demand that in some cases honey is procured and other substances necessarily incorporated in order to prevent granulation.

One word about surplus honey stored in combs made upon artificial comb foundations, and that is, ever since their first introduction, I have bought and sold all of this kind of honey that has come in my way, and in behalf of the house I now represent, I will state that for all surplus honey stored in such thin foundation combs as Mr. Nellis or Mr. Isham manufactures, and secured after the plan adopted by the latter gentleman, and stored in his improved caps, (*i. e.* wood, top, bottom, and ends) we will always pay the highest market price.

My experience in selling surplus honey in this style of combs is perhaps as extensive as that of any one else, and I have never yet had a customer object to it. I think now as I did four years ago, that these foundations will solve the problem of safely transporting honey in the combs, and thus do away with the necessity of repacking it into glass jars.

J. H. Nellis.—The disposal of products is the right theme for a *National* society, and he hoped it would be thoroughly discussed.

N. N. Betsinger said he had sold for years to dealers in Syracuse; but this year he had sold to Messrs. Thurber, and thought it so much better to sell in bulk. Finding a ready sale for all one could raise made it so much better than to sell to several grocers in a smaller town, in a kind of retail way.

J. H. Nellis.—Large bee-keepers will always seek a wholesale market; but smaller producers, in far-off districts, must sell to the home trade, and that can be infinitely increased. To this end local societies should be organized, and the best interests of producers consulted.

L. C. Root.—There is but little danger of over-stocking. Sale can be easily found for all that can be produced. As the supply increases, large producers must have a wholesale market. We want to encourage wholesale men to take hold of the matter and consult their wants.

N. N. Betsinger.—Some were so foolish as to distribute their honey to several groceries in a town and thus run against themselves, often losing 5c. per pound on their crop.

Rev. J. W. Shearer said we must follow the laws of trade. Get the people to use it, and call for it. Then retailers will demand it of producers. The price is now about the same as fine syrups and large quantities can be sold at such prices. We need to educate the people by the popular press. Overstocking the market then will be impossible. Assure the people that they are getting a pure article and there will be no end to the popular demand.

Dr. Worrall.—It is a delicious and healthful article of food; what is better than rice and honey for children, and grown-up persons, too? We must call attention to it. Educate the people concerning it, and thus create a demand.

The convention then adjourned to 2 p. m., when the following report was received and the time asked for allowed:

Your committees on the best means of promoting and advancing the interests of our Society would recommend the organization of local societies, and as a further incentive to the organization of these local societies, we would recommend an insurance feature therewith. That in addition to the annual fee of one dollar now provided by our constitution, that every member of the Society upon being notified of the death of a member shall forward to the Secretary the sum of one dollar, and that such fund when so collected shall be paid over to the beneficiary dnsignated by the deceased member while living.

The time alloted your committee will not permit a full written report at this time, we would therefore recommend that your committee be continued until the next regular annual meeting to prepare plans, etc.

We would further recommend that the Secretary and Treasurer be required to execute a bond of $2,000 for the faithful performance of their duties.

The following letter was then read:

"Chattanooga, Tenn., Oct. 8, 1877.

"W. J. ANDREWS, ESQ., *Dear Sir:*—I suggest that at the next meeting of the N. A. B. K. A. that each one present be requested to draw up a petition to the P. M. General requesting him to rescind his late ruling in regard to the shipment of queens through the mails; and, if necessary, so qualify it, that they can still be shipped through the mails. Let each one get as many names signed to it as possible, forward to the Secretary, and he to the P. M. General. Put a shoulder to the wheel and make it go! I will start one here.

S. C. DODGE."

W.J.Andrews was appointed a committee to wait on the P. M. General, and present the matter to him, in person, and to see what can be done to have bees sent by mail, as heretofore.

The Honey Market.

F. B. Thurber, Esq., who offered a medal for "the best honey in the most marketable shape" to be exhibited at the American Institute, and through whose indefatigable exertions so large a honey market has been created during the past year in this country and Europe, being present was invited to address the Convention. He spoke as follows:

MR. PRESIDENT AND GENTLEMEN:—The firm of which I am a member offered a medal for "The best honey in the most marketable shape," and this has been awarded by the Judges to Mr. Doolittle, of Borodino, N. Y. I regret to learn that Mr. Doolittle is not here, as I had hoped to have the honor of presenting the medal to the winner in person, but I presume it will answer the same purpose if presented by proxy, and I would ask your honorable Secretary to perform that duty.

In this connection and at this time it is perhaps proper, as there are commercial problems connected with this as with every other form of industry, that I should briefly discuss the past, present and future of the honey market. About 3 years ago the attention of our firm was attracted to this as a rising industry, and we made it a department of our business, which, under the able management of Mr. Hoge, has become a great success; so much so, indeed, that it has given rise to some feeling on the part of other honey dealers, who charge us with desiring to monopolize the business. In regard to this I would simply say that we have pursued this branch of our business with the same diligence that we do in other departments and no more; that we offered a medal to attract the attention to the importance of putting up honey in a shape that would tend to increase the consumption, and we believe that the same ability, enterprise and capital devoted to the honey business that is devoted to other branches of trade will result in greatly promoting the interests of this industry, which in the past has not received the attention, commercially, which is deserved. Probably long before, and certainly ever since, Judas sold honey to the Tyrians, it has been an article of commerce. Whether the industry has held its own or declined for the greater part of this period we have no statistical information to determine. Sweetness, however, has always been synonymous with goodness, whether in a physical or moral view, and honey and sugar have been the articles upon which have devolved the duty of tickling man's palate. The use of honey, however, antedates that of sugar, going back many centuries before the Christian era, while the general use of sugar is of comparatively recent date. There are evidences of its high antiquity in India and China, but it appears to have been only vaguely known to the Greeks and Romans. Sugar cane was grown in Cyprus about the middle of the 12th century, and at a later time was transported to Maderia, from whence it was carried to the West Indies. It was not until the middle of the 16th century, however, that the art of refining sugar was discovered by the Venetians, after which it soon became established in Germany, rapidly developed into one of the largest branches of human industry, until now it has become one of the commonest necessaries of life, with an aggregate annual consumption of from 2,000,000 to 2,500,000 tons.

Why the production of honey has fallen so far behind that of its sacharine competitor is a mystery. It is in the highest degree healthful and palatable, and up to about the middle of the 16th century was the only sweet in general use. The sources of sugar are not more numerous, plentiful nor reliable than are those of honey. If all the honey could be saved from all the flowers which bloom on this great continent, our transportation lines would be taxed to their fullest capacity during a large portion of the year in carrying it to market. And yet sugar has grown into an enormous industry, while honey has hardly more than maintained its former status. In America, however, within the last few years a wonderful advance has been made in the production of this article. Improved methods and appliances have been invented, which has greatly improved the quality and increased the quantity of honey stored by the "little almsmen of spring bowers," as Keats has termed the bees. With the improvement in quality has come more than the usual increase in consumption which naturally accompanies improved quality and reasonable prices. This revival in an ancient industry is perhaps due, more than anything else, to the improved homes which have been provided for the busy little workers, which have enabled them to make a better quality of honey than formerly. They have also been taught to store the honey in small packages suitable to the requirements of the retail buyer.

It was to obtain the best possible results in these two requirements that induced our firm, as above mentioned, to offer as a prize a medal bearing an inscription, "For the best honey in the most marketable shape." It is a curious fact that the bees have been taught to build their frames of wax and store the honey, in small squares of comb, of a convenient size for the ordinary family purchaser, or, in other words, they make "to order" the quantities and styles demanded by the consumer. For this we are indebted, I believe, to that veteran apiarist, Mr. J. S. Harbison, and the "Harbison frames" are now a household word throughout the U. S. It is only a few years since these improvements have been made, and the vast increase in the consumption during this short period shows how much depends on little things.

It may be thought that I have given too much prominence to the convenient sized packages and too little to the question of improved quality. I should indeed be sorry to ignore the improvement in quality, but convenient sized packages, both for the dealer and the consumer, are important factors in a commercial point of view. I can say, however, that the honey to which the Judges have awarded the medal, in quality is simply perfect, and as much superior to the far-famed "honey of Mount Hymettus" as can be imagined. I may say, *en passant* that while in Greece last winter I had an opportunity to taste this honey, the virtues of which have been perpetuated in song and story for the last 2,000 years. I can only say in excuse for it that perhaps as the modern Greek but little resembles the heroes of Thermopylæ, the "honey of Hymettus" may also have generated. That the quality of American honey is appreciated abroad is shown by the large and constantly increasing export demand; and all that our bee-culturists have to do is to steadily try to produce "the best honey in the most marketable shape" to insure a demand which will always yield them a remunerative price.

There is perhaps no occupation more attractive and absorbing than that of bee-culture; one never wearies of watching the industry and ingenuity of these little workers, and in this connection I cannot resist introducing a somewhat technical statement, made to me a few days since by a friend, who is an engineer and architect, which illustrates Shakespeare's words, "So work the honey bees—creatures that by a rule in nature teach the art of order to a peopled kingdom." There are but three geometrically regular figures (that is, figures having equal sides and equal angles), which can be arranged around a point so as to take up the entire space. 1st.—Six equilateral triangles, each angle of which is 60°, or the six angles equal to 360°,—the circumference of a circle. 2d.—Four squares, each angle of which is 90°, or the four angles equal to 360°. 3d.—Three hexagons, each angle of which is 120°, and the three equal to 360°. Now it is susceptible of geometrical demonstration that a hexagon affords the largest amount of interior space within the smallest amount of comb or frame work. The bee is in architecture a conservative. Bay windows, mansard roofs and other modern improvements are wholly ignored. He limits his efforts to a line of adaptations embracing his own body, the material he works with, and the structure he erects. How different the condition of man! his field is the world; his resources the infinite variety of nature; the purposes of his life illimitable; his will is left free, and by the light of reason he works out his own lines of adaptation. He enjoys the largest liberty of all of God's creatures, but in none of his activities does he attain that degree of infallibility which marks the efforts of the little busy bee, working under that straitened mental condition which we call instinct.

But to resume the consideration of the influences affecting demand and supply—and consequently of prices—I would say, that the bee-culturists of the U. S., although now far in advance of those of other countries in the use of improved appliances, and consequently in the quality and quantity of honey produced, must not cease their efforts to excel; other countries will adopt our inventions and also improve the quality of their production. Only a few days since we had a call from Mr. Milner, of the British rifle team, who was investigating all improvements in bee-culture made in this country, with a view of introducing them on the other side of the Atlantic; and I am informed that others are taking the same steps. Therefore, we must be progressive, both in the production and marketing of honey. So far as the latter is concerned our firm will do our part, and we have no doubt but that producers will do theirs, to maintain the prestige that our country now has in this branch of industry. I believe that the exchange of views, which are made practicable by such conventions as this, is of great value, and I hope the organization of the bee-culturists will not only be kept up, but perfected and extended.

A vote of thanks was passed unanimously to Mr. Thurber for his very able and interesting address as well as for his exertions to create a demand for honey.

Capt. J. E. Hetherington then addressed the Convention on

Comb Foundation.

Mr. President:—As an introduction to the discussion of the subject of artificial comb foundation, I would say that the inception is due to the Germans, and the honor, if I am correctly informed, belongs to Mr. J. Merhring, who for it received what was known as the "Two hundred thaler Wetzler premium," and gave them the name of "artificial tablets." They consisted of very thin sheets of wax corrogated to form the simple base of the cells, without any extension of the side walls. At least in this form it was presented to me for experiment by Mr. Steele of Newark, New Jersey, as early I think as 1859. Later I had them sent me for experiment, which resulted in laying them aside as impractical and worthless. They were again sent me three years ago, I think, by W. H. Hoge, the gentleman to whose energy is due the fine exhibit at the American Institute Fair. The improvement in these consisted in an extension of the side walls from the base, which contained wax sufficient when drawn out by the bees to form a large portion of the side walls of the cell. To this improvement I attribute its success practically.

To the Germans is due the honor of inception, but they let it rest a period of fifteen years or more, and until touched by the ingenuity of American progress, when it is again brought to the front, a grand success. Consequently to the American belongs the honor of its present practical form. This progress being the result of experiment, there has grown up in the minds of many a prejudice, resulting from experiment made before the improvement was complete. As first sent out, the size of the cell was four and one-half to the inch, a size between that of worker and drone—too large for the rearing of workers, and too small for drones, and consequently was used indifferently by the queen, if used at all. But when the cell was made the accurate size of natural comb it was accepted at once, and in this form we now find it for discussion.

I have pronounced comb foundation a success; I wish to qualify by confining the verdict to its use in the breeding apartment of the hive, as to whether it should be used in the surplus boxes full size, for small guides, or not at all, is a question of honest difference. I will not use it myself at all for surplus in its present form any further than for experiment—and think that to urge or advocate its use in surplus boxes a wrong to bee-keepers, for we cannot afford, for any consideration, to create prejudice against comb honey. My experience is, that under some circumstances they thin the foundation very fine, while at other times the center will remain as thick as when introduced, and hence very objectionable.

I am aware that when it was first introduced, with the walls extended and cells large size, it was pronounced a success by men prominent in the industry, either from the verdict of appearances or too limited experiment; my own experiments at the time proving it a failure. My present opinion is based on the practical use of from four to five thousand frames of foundation used in the breeding apartment of the hive the present season, which is without doubt to a greater extent than ever before used.

I now leave the subject to your tender mercies for discussion.

A vote of thanks was passed for the able and interesting address of Capt. Hetherington.

L. C. Root.—The point of most interest to all is summed up in the closing sentence of that address: "It is a success." This is the expression of one who has used it more extensively than any other, and has had 4,000 or 5,000 frames of it in use this season.

J. B. Hutchinson—Said that he had used 25 lbs of it and had found it a success.

L. C. Root remarked that his experience was also good, but he wished to hear from Mr. Nellis.

President Nellis said that at first the queen refused to use it, but he attributed that circumstance to the use of strong soap suds, to keep the rolls from sticking. This the queen perhaps did not like, and he found a substitute, and now he had no further trouble. He had used it in warm and cold weather and found it a grand success, particularly in the brood chamber. He had used none in surplus boxes, but as others had and desired it made of drone size cells, he had procured a machine to make that size also. When made of pure yellow wax it is no doubt a success. He had tried paraffine and it was some time before the queen would accept it—but with pure yellow wax it was accepted in a few hours.

L. C. Root.—All things considered, is there a gain by the use of comb foundation?

Rev. J. W. Shearer said that there was a gain in the fall. If he wished to increase in August, to get full advantage of the fall crop, and not to wait for them to build comb, he could get it quickly by supplying worker comb foundation, and thereby secure a strong stock to gather the fall crop. He preferred not to winter on fall honey. He took out the combs of honey and set them away for winter, and then after the fall honey was gathered, take it out—giving them the matured honey for winter. He had tried ceresin and they will use it, but it is unsatisfactory. He liked the thin best; for rapid development it is just the thing.

L. C. Root remarked that he had given his bees foundation, and the next day found the cells drawn out two-thirds of the way. He was prejudiced against it, but found it a success.

N. N. Betsinger remarked that he understood that Capt. Hetherington was experimenting with something besides wax in the comb foundation for the brood chamber, and would like to hear from him on the subject.

Capt. Hetherington said he was experimenting, and if he found it a success in the winter as it had been in the summer, he would give a description—but he was opposed to giving a report upon only partial or limited experiments. All ideas were modified by experience, and he was utterly opposed to getting novices to adopt mere experiments before they had been subjected to a thorough test.

A. J. King said he was a city bee-keeper in a small way. He had heard of the sagging of comb foundation in the brood chamber, but found it was caused by the foundation being placed in the frames the wrong side upwards. One way it was weak, while if put in the right way up, it was much stronger.

E. D. Clark said he procured some foundation from A. I. Root, but it was received in very bad shape and was too thin. He had since procured a machine for making it, and pure wax, and now he had no trouble. It was a success.

Capt. Hetherington explained how he fastened foundations. He cut a kerf 3-16 in. deep along the underside of top bar, in width just the thickness of the comb, and placed the foundation in it, ran ordinary white glue along and found it held perfectly. He used the best white milliner's glue for the purpose, and believed it to be the best method of fastening them. He also used the same for wax guides.

A. J. King had received a box of white clover honey from Novice in his shipping case. It was beautiful to look upon, but when using it he found that the foundation used was thick, and not thinned out by the bees one particle. He did not think its use in boxes could be tolerated.

T. G. Newman remarked that he had similar experience to Mr. King's. Novice also sent him a case of honey to dispose of for him, which, upon being used, proved to have a regular fish bone in it, (the thick foundation in [its original state) and that such, if used in that way, would injure the sale of comb honey. If used in boxes it should be exceedingly thin.

N. N. Betsinger said he would give $50 for comb foundation that he could not detect.

A. J. King.—Yes, it was easy to detect, because it was more perfect than natural comb.

Thomas G. Newman then addressed the Convention as follows on

Organization and its Relation to the Sale of Honey.

MR. PRESIDENT, LADIES & GENTLEMEN:

"Order is heaven's first law." The great Father of the Universe has ordained this as one of the eternal decrees. When that Divine order was first applied to our planet, "the morning stars sang together and all the sons of God shouted for joy." In the social compact order is ever essential to man's nature and well-being.

When a few persons publicly assemble they at once set about to organize *some kind of a society*, either formal or informal. Our Pilgrim Fathers, two and a half centuries since, when they landed on the rock-bound coast of New England organized a little band. How has that organization spread out until a vast and powerful Nation has resulted! A Nation whose longitudinal extent is bounded by two vast oceans—its latitude reaches from the ice-bound regions of the north to the tepid waters of the Gulf.

In it behold the vast net-work of smaller organizations, honey-combing all forms of society, from the most barbarous and savage clan to the highest form of civilized and refined life.

As one of these sub-organizations we meet here to-day. Our object being to further the interests of apiarists, in all the varied fields of thought and action.

Passing by the experiments and manipulations with hives and honey, which will receive the attention of others whose daily experiences in the apiary, eminently qualify them to discuss those questions in the most interesting manner—we are brought to a stand by the one great question that towers far above all others in its importance to the bee-keeping fraternity, viz.: "*How* to dispose of our honey to the the best advantage."

In vain do we talk of the best hives; the best implements for every department of the apiary. In vain do we toil and labor from morn till eventide, manipulating our pets and their surroundings. In vain do we tell of the large amount of honey stored away in our honey houses. *Vain* is all this, if we cannot dispose of it to advantage and thus "*reap the reward* of our well doing."

The old couplet—"Supply and Demand" —furnishes the key to unlock the massive gates that stand between us and a brisk demand for honey. Often the supply exceeds the demand, but in the near future the reverse will state the case. Already has the daylight become visible through the dark gloom of a glutted market and limited demand! Many who, heretofore, have been shipping to large cities have now built up a trade at home that far exceeds their means of supply. By persistent effort, this can easily be accomplished in almost every village and hamlet in the United States.

We know of a small grocer who had done nothing with honey before; being induced a few days since to take some comb honey, astonished himself by selling 120 lbs the first day it was in his store, and has sold large quantities every succeeding day—building up quite a trade in honey at 25 cents per pound.

As articles for sauce decrease daily, the thrifty house keeper looks around for something to take its place besides canned fruit. Honey is just the thing—and the demand will increase and grow to astonishing proportions, if the supply be kept up with honey in good and attractive shape.

The display of honey at the American Institute Fair in this city is very creditable to those who put it there—but there are some things that invite criticism, about every lot in that display. So much so that the committee found it very difficult to award the medal to any *one* exhibitor. They wished again and again that the prize had been divided into two—one for "the best honey" and the other for "the most marketable shape."

Small frames or boxes will be favorites for comb honey. These small packages will place this delicious article within the reach of *all*. Small crates or shipping cases containing only one tier of frames or boxes will always command the admiration of those who handle honey in the comb.

But some will say: It is very well to talk about *creating* home markets, but in what way will organization assist us in the sale of honey? We answer—all honey should be graded and a scale of prices established to extend to a given boundary. Now one compelled by his needs may sell honey at the very commencement of the season for any price that may be offered, and thus unintentionally break down the market by giving a start at too low a rate. In this way, individual action is seriously damaging to the *many*, and works in a detrimental way to *all* honey producers.

Organization could and should help this state of affairs. California, Missouri, and other State's Conventions have taken the initiatory, by appointing committees whose business it is to grade and then dispose of the honey of its members. If this were done in every State or district, we should hear no more of the markets being broken down by premature and forced sales.

We throw out these suggestions and commend this important matter to the serious consideration of the Convention, hoping it will take such action as may result in the most good to all.

A vote of thanks was passed to the last speaker for his address.

Rev. J. W. Shearer remarked that the subjects treated upon by the last speaker were very important, and as a correct idea of honey, its production and uses was essential to its more general production and consumption, he would move that an address to the public be prepared, setting forth some of the principal improvements made in bee-culture, and giving a few hints concerning its general character and usefulness; that this address be published far and wide, and thus help to increase the consumption of this excellent commodity.

This resolution was passed, and the Rev. J. W. Shearer was appointed to prepare the address. He hastily penned and submitted the following which was adopted:

Facts for the Public.

The National Bee-Keepers Convention, in session at New York, Oct. 16 to 19th, 1877, aware of the general lack of information concerning improved methods of apiculture and its products, respectfully submit the following statement of facts for general information concerning a large source of personal and national revenue in preserving the honey which God has caused to flow so abundantly in the vast and varied flora of our country:

1. It is now only a few years since the invention of *movable comb hives* has opened up a new era in bee-keeping, and placed it on the basis of a successful business pursuit. Such hives, adapted to climate, furnish every facility for intelligent management of bees by regulating swarming, guarding against moths, and manipulating both bees and comb.

2. The inventors of the *extractor* or honey slinger, a machine which empties the honey from the combs by centrifugal force, with-

out injury, so that the combs may be returned to the bees, marks another great step in apiculture. Thus virgin honey, free from foreign admixture is obtained, having the flavor of the flower from which it is drawn.

3. The further invention of artificial comb foundation, made of pure wax, first successfully used to a large extent this season, completes the requisites for placing bee-keeping on the basis of a great industry in our country. Bees receive this artificial comb foundation with readiness as receptacles both for honey and brood.

4. Simultaneous with the first and all of these improvements, the introduction of Italian bees and improved modes of rearing queens, of transporting and introducing them to colonies, has greatly improved the value of the honey gatherers, both because of the superiority of the Italian bee and the introduction of new blood. New blood prevents the danger from in-and-in breeding.

5. The great drawback to apiculture is the *sting* of the bee. Danger from this source is now largely overcome by the simple appliances used for the protection of the person and for subduing the bees. The most vicious colony may be subdued in a very few minutes.

6. To consumers of honey, a few facts are necessary in this article to preserve them from imposition. Nice white comb speaks for itself and is generally admired, but the price many lovers of honey cannot afford. It makes a beautiful dish for the table but is no better than *extracted* honey. All comb is wax, and wax in the stomach is perfectly indigestible. Extracted honey is the pure liquid honey as it is taken from the combs by the honey slinger, free from any foreign admixture. It is entirely different from what is known in this market as *strained* honey. Consumers help to impose upon themselves by the false idea that pure honey will not granulate. They desire ungranulated honey and dealers will attempt to supply the demand. Almost all pure honey will granulate when exposed for some time to light and cold. The granulated state is a fine evidence of pure honey. Much of the jar honey heretofore sold in the markets, and recommended not to granulate, is a very inferior article, composed largely of glucose or some inferior substance. Granulated honey can be reduced to its liquid state in a few moments by placing the jar in warm water. When thus liquified it so remains for some time before again crystalizing. Consumers may be sure of a good wholesome article by purchasing granulated honey and reducing it.

7. To producers. By full use of improvements in bee-keeping, the honey crop of America may be almost indefinitely increased and become a great source of national revenue. None need fear over-production. The home demand and consumption is largely increased whenever people learn to know the superiority of such honey. Dealers in N. Y. have already commenced a large export trade, and they tell us that their only difficuly is in procuring honey in proper shape and quantity to supply the growing demand. Trade demands that they be put up in nice, attractive packages, and in small parcels or jars so as to be readily handled by grocers and consumers. Honey was for centuries the principal sweet known, and is one of the most healthful of all. Improvement in refining sugars have within the last two or three centuries led to its general adoption. Why may not also new improvements in apiculture restore it to its true place as a general favorite which was lost by bad management and the consequent corresponding limited supply?

We believe that improvements in bee-keeping as compared with old methods are not less than those seen in railroads and steamboats as compared with former modes of travel.

For mutual information we would advise the organization of local societies and conventions to further this business among all interested in apiculture.

The following resolution was unanimously passed: *Resolved*, that the Secretary be instructed to send copies of this address to the various agricultural and other papers with a request that it be published in the interest of a general knowledge of apiculture—and that $25 be appropriated to defray the expenses of printing and postage.

THIRD DAY.

Met at 10 o'clock, when the next place of meeting was ballotted for with the following results on four ballottings:

	first.	second.	third.	fourth.
New York,	10	12	13	15
Cincinnatti,	10	12	13	11

It was agreed that the meeting for 1879 should be held in some city in the South or West.

The following were appointed an Executive Committee for the next Convention: J. H Nellis, W. J. Andrews, T. G. Newman, A. J. King and W. M. Hoge.

Senator E. Y. Pillow of Tennessee, remarked that our Southern friends would be glad to have the Convention held in some central location, so that they may take part in the deliberations.

An address from Dr. E. Parmly was then read as follows on

Importing Foreign Races of Bees.

MR. PRESIDENT;

The object of association is the benefit of its members and to accomplish by united action what cannot be done singly. Sometimes the end to be attained is even beyond the strength of a single association and then such matters are placed before a number of associations represented by their delegates in convention.

For the discussion of such and other questions we are assembled to-day, and if we fail to effect something worthy of our annual meeting we have met to but little purpose.

I desire among other things to direct the attention of the brotherhood to the desirability of making effort to import bees that have not as yet been tested in this country, which either pure or in some of their crosses may prove an acquisition to the country.

The accounts we receive from abroad of the Cyprian bee are very promising and it would seem from Mr. Gravenhorst's statement, as given in the Oct. number of the A. B. J., to be in some respects superior to the Italian. This bee can be obtained at no great outlay. Mr. T. F. Read, Treas. of the N. Y. Society, has attempted a direct importation, and we hope soon to hear of his success.

Apart from any merits or demerits of the Italian as compared with the black bee, the importation has been of great benefit to us in familiarizing thousands with the habits of bees through study and experiments that otherwise would not have been undertaken and in stimulating many to seek improved methods of culture. From this came our bee papers which to-day have a large circulation and are much quoted by the agricultural press here and abroad, and we are now far in advance both in the practice and science of apiculture of where we would have been but for this importation; and from this knowledge we are the better prepared for experiments with other races of bees, having verified many of the laws of bee life which will occur to every practical man without enumerating them.

I know from experience how little attention is paid to a letter from an individual to some foreign missionary or consul, and would therefore propose, to command respect and attention, that a committee on correspondence be appointed by this convention to obtain all possible information respecting bees that have not yet found a home in this country.

As to Apis Dorsata of Java, Borneo, Ceylon, etc., referred to in a late number of the JOURNAL. An attempt is being made by an Italian bee-keeper—Guiseppe Florini, of Menselici—to obtain it. I think it desirable to get all the information we can about this bee, and as soon as received, send to our bee journals, and then if thought advisable endeavor to raise a fund to send for it. There are among us young men of skill and education who no doubt would be pleased to make the voyage, and at small compensation. Owing to the difference in the seasons this would be done during our winter, and the bees arrive here early in the spring giving a full season for propagation and distribution.

Let each year be characterized by some effort that will command respect from the public for our Association. Let its efforts, like its name, be National. Let us not rest satisfied until we have a thorough knowledge of the geographical distribution of honey bees, and by actual test know their merits and adaptability to different sections of our country.

I have endeavored to obtain specimens of Apis Dorsata, but without success. I present for examination some specimens in alcohol of bees from Mount Lebanon, which have the general features of the Italian; also a small bee from Java which I know nothing about. They are all the results from considerable correspondence with our foreign missionaries. I hoped they would show more interest, but they are hard to move.

A vote of thanks was passed to Dr. Parmly for his address and the exertions he is putting forth to get other races of bees imported, and all were hopeful that much good would result from such races by crossing, and infusing new blood, etc.

The following essay by Martin Metcalf was then read on the

Rearing of Italian Queens.

The careful breeder of Italian queens need not be told that there are many perplexing difficulties in the way of *pure breeding* upon the theory of pure queens and pure progeny. That is, that if the queens be pure, no matter what kind of drone they may meet, the drone progeny will be absolutely pure. To say nothing of the fact that if this were so, it would contradict the rule laid down in propagating everything else. The experienced breeder will admit, we think, that an error has probobly crept into the accepted practice right here, and our own conclusions are firmly established, that the same principles which are universally applied to the development and perfection of a distinct type of horses, cattle, swine, sheep, or any other family of the animal kingdom, must be adopted and rigidly adhered to, if we hope to make any progress, or even maintain the characteristics we now possess.

Thus much premised, what rules then may be laid down as a general guide to be followed in propagating Italian queens with a view to maintain their purity, and if possible to improve upon and perfect them, if indeed, perfection and a fixed type be attainable. In answering this question it may be pertinent to inquire as to the rules demonstrated to be necessary, time out of mind, in the breeding up of horses, cattle, etc.

Selecting those individuals of colors, form, gait, or general make up, which we most desire, we mate them, and so continue, each succeeding generation selecting the individuals bearing in themselves the most striking and desired qualities, until we find that nature becomes gradually more and more fixed in a distinct type or family, with only here and there an individual showing the plebean origin of all regal blood.

The Italian bees are no exception to this rule, and are not absolutely pure and of a distinct and fixed type, even in their native habitat, seem sufficiently proven by the admitted fact that no imported queen has yet been seen whose royal progeny has been constant in color, form, or other characteristics of the parent.

"Hypothetical, and running after moonshine," as interested importers and non-progressive bigotry and egotism may term it, we have for ourselves fairly demonstrated, that, in the race of Italian bees *perfection* has *not yet* been reached, and if we hope to attain it, or even maintain the imported standard, of the three yellow bands of workers, we must forever abandon the bogus drone theory of the books, and re-adopt the more sensible system, ruling in everything else under the sun, viz., that "like produces like," or the good old orthodox doctrine of "every seed after its kind."

"Progress backwards" seems to be the motto of some, and even one of the most extensive importers of Italian bees writes that the "*color of the drones* he will not warrant at all, so much depending upon circumstances," and that "an occasional black bee emerging from the brood combs is no proof of the queens' impurity," etc.

I will here answer, and—in Yankee style of giving reply—would like to propound the following query to my friends, viz.:—Suppose that in the order of time your good housewife should present you with a black daughter, or "leather-colored" scion, for royal hearth and heir to its estates, would you not consider either horn of such an imaginary dilemma a rather curious "circumstance?"

Keep the colored gentry away then as the only safe rule where your young queens are "courting" around promiscuously, for they are all "free lovers" and liable to mate with royalty or the common herd.

And how shall we do this, is the question? Like all others, it is more easily asked than answered.

One prolific source of black or mixed drones is from worker-laying, viz., worker bees laying eggs, as they will often do when destitute of a queen, especially when drones are not plenty, see that not one black or hybrid bee is anywhere about the apiary; for where they are, indifferently colored drones will appear. See to it also, that the drones are bred from the queens that give the best progeny, so far as possible. And the rule is that the yellowish queens give the best drones—the exceptions being few indeed—and the best queens when properly mated. When detected producing darkly-colored drones or workers, or workers of the form of blacks, pinch their heads off. They won't trouble any more.

So far as my experience goes, the bees of a hive showing the lightest colored queens, drones and workers, are more industrious, give greater profits, both in swarms and honey, and are more easily handled than are the black or hybrid stocks. Not but what I can find swarms of light colored workers that will sting one's hat off, and whose drones often so intrench upon the stores of the workers that scarcely anything is left for the bee-keeper, but let no one lay this state of things to the Italians. The fault is with the bee-keeper, who ought to know better than to keep that kind of a queen. If the trouble be found on inspection, in drone laying by worker bees, place in a hive with glass sides separately each frame, keeping watch; let an assistant carefully and slowly raise out the frame within reach whilst you keep an eye on the culprit. When caught in the act pinch as before, until that game is stopped. In this way I have killed 27 in a nucleus of 1,000 bees. If the queen has been only partially fecundated, as sometimes happens, pinch again, and also when becoming defunct with age, and immediately introduce a vigorous one in a cage—liberating her after 12 or 24 hours. Never leave a stock queenless an hour or more before introducing a stranger queen; for if you do, it is at the risk of her life, or 8 to 12 days of her valuable time.

L. C. Root.—It is well known that the crossing and changing of stock is practiced with good effect. I prefer Italians for extracted honey, but for box honey, the blacks. I want both in my yard. If I had no Italians I would give $100 for an Italian queen if I could not get her less.

C. R. Isham.—How can one get pure queens with both kinds in his yard?

E. D. Clark remarked that he had 300 colonies, but not one Italian. He was very successful with blacks, and would like to know which race of bees gathered the honey that took the medal?

N. N. Betsinger.—It was gathered by the blacks.

A. J. King—The probosis of the Italians being longer than the black's they get more honey from the bloom.

N. N. Betsinger—I have kept both side by side for years and know their merits. The blacks are stronger in the spring, but during harvest Italians are far superior for honey.

Mr. Betsinger then addressed the Convention as follows on

Preparing Brood Combs for Winter.

Mr. President:—The question being, "Is it necessary to extract honey from the central brood combs for successful wintering,"—I will answer emphatically, No. The fullest combs should occupy the center. Having had vast experience in wintering on summer stands, I think I can describe the position which the honey should occupy in the brood chamber:

1. By exchanging the partly filled combs generally found in the brood nest, with those at the outside, we not only get the honey where it is most needed, but we get the well ripened honey where it is accessible during the long cold spells in early winter, which is very essential in order to retain the healthful condition of the colony. Some may say it is contrary to nature to thus exchange the combs. Let us see. When the honey harvest is over, where do they commence to use the first honey? From the extremities of the hive. After frost no more honey is found, and brood rearing ceases; they then lie in a half torpid condition, and while they are in this state it is absolutely necessary for them to consume the very best of honey, and while the colony is in this condition they can endure the long confinement which generally takes place the first two months of winter, with still no signs of dysentery.

2. By having all full and well sealed combs in the center, (combs should be not less than one half inch apart) we have a body that when once heated will not be affected by the sudden changes for which New York State is noted. To illustrate the influence that heat has upon a mass of sealed honey, I will give a brief description of my honey house. The south side is nearly all constructed of glass, with a tin roof, and when the sun shines it so heats up the interior that when I have several tons of honey stored there the thermometer varies but little during the night, thus curing the honey perfectly and preventing leakage—thus being, with other slight improvements, in the best condition for all mercantile purposes.

3. The bees while thus clustering upon their solid stores, will begin to consume their honey from the central portion of the hive, and by the first of January will desire to re-establish brood rearing; and while the bees are thus employed, feeding the brood, begins the evil, which I call dysentery. If we can keep the center of the hive well filled with honey, so as to prevent the raising of much brood until the middle of April, perfect health will result, with no spring dwindling.

Therefore, extracting is not only unnecessary, but injurious to the colony. Out of the number I endeavored to winter the past season, those that were fullest of sealed stores were the only ones that survived. On page 230 *Bee-Keepers Magazine*, F. Benton advises extracting from the central combs to give the bees empty cells on which to cluster. This is very objectionable, because it encourages the queen to lay, and the remaining honey is thrown from its natural position, thus leaving it in a transparent state, both being very injurious to the colony.

A. J. King.—In my opinion, one prominent cause of disease and loss of bees in winter is the fact that they are frequently put into winter quarters supplied almost entirely with honey gathered in autumn, such as buckwheat, aster, etc. Now, nearly all of these fall blossoms secrete nectar containing acids and other substances detrimental to the health of the bees, and I would recommend that in June and July the bee-master remove frames of honey from the hive and keep them to replace those filled in the fall, so that the bees may have *summer* honey to *winter* on.

This fall honey will be found very useful in building up stocks in spring, and nothing will be lost by this exchange method. Rather than use this late fall honey to winter on, I advise the feeding of sugar syrup made by uniting by measure two parts of best coffee sugar to one part of pure soft water, and boiling for five minutes to destroy the grain, and adding a small quantity of salicylic acid in the manner already fully described in the *Bee-Keepers Magazine* and AMERICAN BEE JOURNAL. I have kept bees somewhat largely for a number of years. I at first wintered in a double walled brick building with dead air space between walls. They uniformly *wintered well*, but as uniformly suffered terribly by *spring dwindling*. The temperature of the building averaged about 40° above zero. The latter part of February they would commence to breed, and by the time they were set out they had a good supply of brood in all stages; the difference in the temperature no doubt chilled the brood and generated disease which would soon exterminate them. For some years past I winter on the summer stand, leaving the *lower part* of the combs in the central frames empty for the bees to cluster in, but leave plenty of sealed honey above them; the warm air ascending from the swarm keeps this honey warm. I place three small ½ inch strips of wood on top and crosswise of the frames, over which I spread a piece of thick quilt, allowing the ends to lap over on each side and extend down to the bottom-board; over the quilt I place 3 or 4 incher in depth of absorbing material. The bees thus protected can pass from frame to frame over the top-bars and remain in warm air all the time. I keep them packed until warm weather. If the frames are full of honey I extract the lower half of the three center frames. Thus prepared, I seldom lose a stock.

J. H. Nellis.—It depends largely on the heat in the hive. If bees are comfortably warm they will get the honey if it is moderately accessible.

J. H. Hasbrouck then delivered the following address on

Management of the Apiary.

I will preface this paper by saying that I propose to collate in it what is considered by some of the most enterprising bee-keepers as the latest and best system of management, as I understand it. If I do not correctly understand, or if there is a "better way" not generally circulated, this is a most excellent opportunity to have wrongs righted, or to publish and discuss what has been newly discovered.

I do not suppose that I will be able to offer a system upon which we shall all agree. Some are undoubtedly attached to plans they have long used and are not yet prepared to assent to what others consider progress. But let us all now for a while lay aside prejudice for our own ways and consider calmly whether there is not something better.

I cannot claim for what I have to offper-ter fection, but, I believe, it is the besownre known; not originality, for, as far as I on learn, it is the system practised with more al less modification, of course, by men who ac, accuslomed to take by far the largest quantities of honey, of which I have heard. I shart attempt only to select and combine what hall been published in parts repeatedly, but stils needs to be repeated. Finally I cannot say that the system just as I shall present it, is one which I have tested in every particular. In the main I have practised what I recommend, but of some things I have but lately been convinced, from the testimony of others or from unsatisfactory results of opposite courses.

First then let us begin when the season begins, when all nature is waking into new life and the bees after their long nap are able to get out to take a sunning pretty frequently. Now is the time to make the good beginning which will ensure success if the year be favorable.

We will now open our hives at noon of a warm day and thoroughly clean them from all the accumulations of winter. We will next introduce a good feeder—made by cutting out 2 or 3 in. of the comb of a frame, and nailing in its place a little trough about as wide as the comb, underneath the top bar. This feeder is to be the outside comb of the hive and to be filled through an auger hole in the top bar; it is the only thing I have tried that is a success for early spring feeding. At this time all comb that the bees will not thoroughly cover is to be taken out of the hive and division boards fitting tightly are to be hung close to the remaining frames. The whole we will now cover snugly, first with a muslin sheet with a hole through it just above the hole in the feeder and then over all a couple thicknesses of woolen blanket which is allowed to hang down by the sides of the brood nest.

Now we will stimulate the bees by feeding them daily a little sweetened water in the feeder and some unbolted rye meal placed out of the reach of storms. Provide the bees also water outside the hive, in inverted bottles, if you are not near a stream. Keep the entrance contracted so that the bees may retain all the heat possible and the queen will begin to lay immediately, if she has not before, and will lay much more rapidly than in a large uncontracted hive, however strong a colony may have been left in it the previous fall. In this latitude the time would generally be about the middle of March. In 15 days (April 1st) you may open your hive and find the inner combs pretty well filled with brood. Spread the combs apart and put an empty comb in the middle. In five days (April 5th) you may repeat the operation; and in five days more (April 10th) as the first bees will begin to hatch, and the weather is warm, you may put in two. If you started with four frames you now have eight, and in five days more (April 15th) all will be filled with brood which will be hatching rapidly.

April 15. In five days cherries will blossom and the first honey harvest begins. Your hives are now strong with young bees, and daily growing stronger, and the first hatched are old enough to begin work outside. Put in more empty comb till your hive is filled. In 3 or 4 days every empty cell is filled with honey, if the weather is fine. Now if the bees are left alone they will cap this honey, and after a time make preparation, then swarm and probably go to the woods. Just before they get this honey capped, we must open the hives, set every comb into the extractor and throw out the honey, and return them empty. They will fill them again in 3 or 4 days. Cherry blossoms last but a few days, but apples and pears will be coming on, and unless the weather is unfavorable, it will not hurt them to be robbed entirely. If a storm comes up we must feed a little back. Next the Norway maple blooms; if we have none we should make arrangements to have them at once, and there is 2 weeks of the best honey harvest of the year from it.

From these sources we ought to be able to extract at least 20 lbs. three times from each hive, and much more can be done if all things are favorable. By emptying the honey every few days we will give the queen an advantage and the hive will all the time be growing stronger.

In this connection we must digress to say that as early in the season as we are able to get the queens, we must re-queen all our stocks. We will find great advantage in this, 1st, because when driven under high pressure no queen will be as fertile the second year as necessary. 2nd, it will prevent constantly renewed crops of drones which will stick by us by this system till the last minute of the season, but with young queens will disappear quickly and no more will be produced. 3rd, although some have found that re-queening did not prevent the swarming fever, yet I believe it has a powerful tendency that way. If we can buy these queens and all others that we need through the year at $1 or even $1.50 apiece, we better do it. Nobody in a good honey region can afford to raise queens at that price by ordinary process.

Fifteen years ago some one made the discovery that the fertilization of the queen could be confined to one of 3 or 4 selected drones, and the method has been tested and practised uniformly with various modifications by some who have been ambitious of having fine stock. With the fogy method still persisted in by some, we can never expect anything but degeneracy in any races of bees we may secure. How long would it take the finest and most valuable breed of fowls to degenerate into the scrubbiest dunghills if turned loose to mix indiscriminately? No other animals cultivated are allowed to mate with such an entire contempt for consequences as are bees, while there is no more necessity for this looseness than with any other animal. I believe that there are possibilities of improvement to the intelligent queen breeder which we now have but little conception, and that he who will not through prejudice or cannot through ignorance observe the same principles of selection with his queens as are practised with other stock will soon find his "occupation gone."

But to return from this digression. The harvest from the fruit trees and the Norway maple is beginning to fail. We now have our colonies strong and furnished with young queens. We will now let the bees fill up their hives with honey and cap it over to keep. By the time they have done this the first honey drouth will have commenced There will be only scattered flowers of various kinds in the fields, and even if they secrete honey the bees will not work on them to any extent, for it is their nature to require large fields of flowers of the same kind. This drouth will be but short, probably about the last week in May or the first in June in this region. We have very much more honey than we would have secured if we had attempted to have the bees store it as they gathered it, in surplus boxes of any kind. They would have hesitated till the harvest was nearly past to begin in such boxes, if they had commenced at all, and then worked leisurely in building comb and filling it, but would have been hindering the queen all the time, by filling cells with honey that ought to be filled with brood. Our hives would not have been more than half as strong as they are now, and besides we have kept this great number of bees driven all the time with the greatest anxiety to fill their hive, in which they have not succeeded but at the very last, and consequently they have been excited to the greatest exertion, and have all the time done their "level best." No time has been lost in building comb, and no bee has been kept inside the hive for that purpose when it should have been in the field.

There can be no question but that a hive of bees will gather from 3 to 5 times as much honey, according to the season and the rapidity of the yield, thus, when the extractor is used freely as they would if put into surplus boxes. This honey has been standing open in jars or barrels, protected from dirt and insects of all kind. It is not in very good shape for market. It isn't so nice to take nor will it bring so good a price as comb honey. We have quantities of bees and they are idle; let us set them to work by feeding back thin honey and make them put it into surplus boxes or frames. For this purpose let us take out the combs on both sides till we come to the brood nest, and extract the honey from them and hang them away in a tight box where we will be able to fumigate them occasionally with sulphur. Into the place of these combs removed we will put the surplus arrangement. and some large feeders into which we will pour our honey as fast as they will take it.

Now they are excited again, and won't hesitate to begin in boxes, but will work as if their lives depended upon it, building comb, packing away the honey and capping it over. We must be on the watch and take it away as fast as they get through with it, and give them more empty room. They'll be too busy to think of swarming, and they will give us no trouble in that way.

One objects that it will take too much of this honey to feed the brood. It will be sufficent answer to this objection, that it is an axiom that it will always pay to feed all the brood you can ever get started—the more the better. Some might think that if bees are fed thus rapidly they would store the honey in the cells in the middle of the brood nest as fast as the brood hatched, and thus weaken the colony. This is not my experience. If we give them room enough on the side of the brood nest to build new comb they will store the honey there while the interior of the hive will be left to the queen who will be stimulated all the time and hence lay more eggs than she would if no honey were coming in. By the time our honey is all in boxes, the summer harvest is upon us.

Let us proceed as before—extract every 3 days or oftener—till the harvest shows signs of failing. Then let the bees fill up again to keep. This will bring us, in this region, to about the middle of July. Now there will be a long drouth, during which we can work our bees again to good advantage, putting their extracted honey into combs for market. They will probably have it all finished before any fall harvest comes on. If they have any time to spare, we can employ them most profitably by giving them comb foundation to chew out, to make as many additional combs as possible for use next spring. We will soon come to estimate our increase, not so much by the new stocks we make as by the number of new combs we have emptied and ready for building up our stocks in the spring. While they are chewing out the combs we must feed them a little sweetened water to keep the queen laying, so that she will fill the new combs with brood as fast as made, and that will be very rapidly—one about every 3 days—as sufficient material is furnished them in the foundation to lengthen out the cells. If we want any increase of stocks, now is a good time to make them. Let us take out two combs from each of 4 hives, and put empty foundation in their place. Set the 8 frames removed covered with the bees into a new hive, close it and immediately release at the entrance, a laying queen obtained in time to be ready. While they are all confused they will not fight each other nor disturb the queen. You will never lose a queen this way. If we get more frames than we can use in our hives, we can take out some of the outside ones, which will contain no brood, extract their honey and hang away till next spring.

After increasing our stocks in this way 25 per cent., and having them all strong, the fall harvest will probably have commenced, or before this if we are in the vicinity of buckwheat fields. This harvest is to be gathered the same as the preceding one, and stored in boxes, if we can accomplish this before it is too late.

Now their labors are about over, and it is time to think of fixing them for winter. If we wish further increase we will order more queens, to the extent of the number we can furnish with 8 frames in the following spring. As soon as the queens come we may divide and equalize our hives, and then some warm day about the middle of Oct. we must take out all the combs, put then into the extractor and throw out all the uncapped honey gathered from late flowers, and if any comb is filled more than ⅓ of the distance from the top-bar, uncap to that height and extract. Now close them up again till some cool day in Nov. Then the bees will be clustered on a few of the middle combs with several combs on the sides without bees. These combs should be taken out, and tight division-boards moved up closely to each side of the remainder. A muslin sheet should be put over them, and over this two thicknesses of woolen blanket, long enough to hang down by each side.

I have practised this method of wintering for 4 years past, putting up last year 50 stocks, and have corresponded extensively with parties in different localities who have practised it, and have heard of but 1 colony that died—lost from insuffieent honey. The conditions necessary to successful wintering seem to me to be: 1.—Young bees from colonies kept at work, and consequently breeding as late as possible. 2.—No uncapped honey and at least ⅔ of the bottom of each comb empty. 3.—A hive contracted to the cluster, so that the bees are not obliged to keep warm a large unoccupied space. 4.—Woolen cloth above.

Thus having wrapped up our bees, we will have time to weigh our honey and get it to market, if not done before; to get our money and prepare for the next campaign.

After the answering of a few questions on some of the details of this paper, a vote of thanks was passed to Mr. Hasbrouck for his essay.

Silas M. Locke then delivered the following address on

Introducing Queens.

Mr. President:—This subject has been thoroughly investigated and much said pro and con upon it, and yet many seem to call for a more speedy, thorough and effective method than that generally used. It is essential when introducing many queens, that it be done quickly, and at the same time be effective. Time is money, and very valuable generally, when we are introducing queens. It is generally admitted that the bees recognize their queen by scent. Now if we can scent the bees and queens to be introduced alike, and also compel the bees to become incensible to the loss of their own queen, we have gained the object desired. My method is as follows: First get the old queen. In order to do this I compel the bees to fill themselves with honey, that I may handle them more safely and to make them better natured, for the benefit of the queen to be introduced. I do this by blowing a little rag or punk smoke in at the entrance, rapping the hive for a few moments to thoroughly frighten them, and then I give them five or ten minutes to fill themselves with honey Now, if the frames remove easily, I find the queen by taking them out and examining them, after smoking the bees a little with tobacco to quiet them. In the majority of cases I find it more effectual to drum the bees and queen out. The drumming process is as follows: After the bees have filled themselves with honey, remove the honey board and replace the cap, or with a box hive, turn it up side down and place a box to fit as a cap on it. Then blow rag or punk smoke in at the entrance, drumming sharply on the hive at the same time for the purpose of driving the bees up into the cap. After the larger portion of the bees are in the cap, take it off and drive down the bees in the hive with rag or punk smoke; smoke the bees in the cap with tobacco.

Now if you have not got the queen, put the bees in a box prepared for the purpose, being well ventilated with holes covered with wire cloth, and repeat the operation of drumming until you have secured the queen. After you have Her Majesty, smoke the queenless bees thoroughly with tobacco. You will know how much tobacco smoke to use; be careful not to produce nausea or the bees will besmear themselves. Let the queen to be introduced loose with the queenless bees after smoking her a little with tobacco. Then shake them up until the queen is in the center of the mass. Leave her long enough to become thoroughly scented, and then smoke the bees remaining in the hive with tobacco; the object being to equalize the scent. Then replace the queen and bees, and the operation is complete.

This is a short method, taking only about 20 minutes, and I am confident ot its success. With it there is no waiting and loss of 24 to 48 hours in the busy season. This is the H. Alley's method. I have so introduced several safely, without loss.

Patents.

C. R. Isham.—Are patents upon hives and implements for the apiary detrimental to progress and improvements in bee culture?

A. J. King.—Many no doubt have been humbugged by worthless patent bee-hives as well as in other patented articles, as churns, washing machines, etc., yet, on the whole, they have been a blessing, and I believe that the present high standard of bee culture in this country is largely due to the fact that the pioneers in the business were protected in the use and sale of their improvements by law. I fail to see why a bee-keeper should not be thus protected as well as inventors of any other appliances; yet nearly all the essential features of the 600 patents on bee-hives may be embraced in a half-dozen hives, and these are now mostly public property. All that a purchaser need to ascertain, in order to avoid being humbugged, is first, the genuineness of the patent; second, the specific points covered; and in nine times out of ten he will have no desire to use the patented points.

C. R. Isham.—Was Mr. Langstroth the inventor of the movable frame hive?

A. J. King.—In regard to this patent I am very sorry to be called on to say anything, because it awakens unpleasant feelings in regard to past transactions, and it is only in the cause of truth that I make the following statements:

Although Mr. Langstroth may be an inventor of a modification of the movable frame principle in bee-hives, yet he is not the original and first inventor of any essential feature in what is known as the standard Langstroth hive. My brother, H. A. King, having been prosecuted by the principal owner of said patent for an alleged infringement, spent about two years time, and $5,000 in accumulating evidence, the result of which proved that this patent was ante-dated in all its essential claims by several both in Europe and America.

The evidence of this in the shape of old bee-hives, old books, European patents, the affidavits of prominent and respectable parties, all verified in the manner provided by law, are now on file in the office of A. F. Perry, Cincinnati, O.

As an extensive introducer of movable frames in bee-hives and a disseminator of useful knowledge in bee-culture, and as (I believe) a conscientious man, I admire and love Mr. Langstroth, and I think we shall all of us feel a profound gratitude to him, Mr. Quinby, and other pioneers in our chosen pursuit; and if anything I have said has wounded the feelings of any one present I hope the impression may be as writing on the sandy beach, where the first inflowing wave will wash it away.

It being time to adjourn, the following resolution was passed unanimously:

Resolved, that we tender our earnest thanks to Messrs. Thurber & Co. for their kindness in so thoroughly promoting the interests of this Association; to Mr. W. M. Hoge for his energy and exertions in securing a good display at the American Institute Fair and to the venerable Peter Cooper for the free use of the Hall in which we held our meetings.

In accordance with an understanding A. J. King took the stand and producing a nice gold-headed cane, read thereon the following inscription: "Presented to Wm. J. Andrews by the National B. K. Association, Oct. 18, 1877." Mr. King remarked that it was a pleasure him to thus publicly acknowledge the appreciation of the services Mr. Andrews had rendered the Association during the past year as its president, and the interest he had taken in its prosperity and usefulness. In presenting it to him in behalf of the Association, he would only ask that it may be received as a small token of their respect and esteem.

Mr. Andrews was surprised to receive this honor, and responded by saying that he should ever cherish it as one of the most valuable things in his possession.

On motion the Convention adjourned to meet again on the second Tuesday of October, 1878. J. H. NELLIS, Pres.
THOS. G. NEWMAN. Sec'y.

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☞ Mr. W. M. Hoge, manager of the honey department of Messrs. H. K. & F. B. Thurber & Co., starts for Europe some time during this month to look after their extensive honey interests on the Continent. Last season this firm opened negotiations with European correspondents for the exportation of honey, as our honey market was dull, and low prices prevailed; the idea proved to be a good one, and before the season closed they had shipped and sold 300,000 lbs., principally to ports in Great Britain, but also to Bordeaux, Hamburg, and Stockeron (in Austria). The demand from Europe this season, which is now beginning, promises a large increase on that amount.

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☞ We have issued a large special edition of the JOURNAL containing the Report of the National Convention, award of the Gold Medal, and an illustrated catalogue of the display of Honey and Implements for the Apiary, which producers will do well to scatter among consumers. Such will do considerable to awaken an interest among them and at the same time serve to create a demand for honey. We hope all will feel interested in scattering them. Price 20 cents each.

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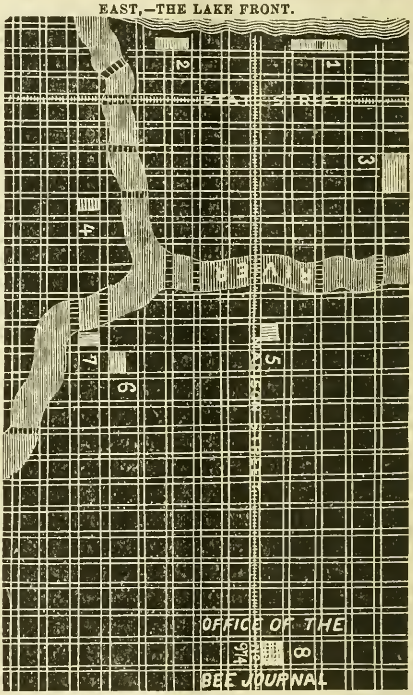
☞ C. O. Perrine, Esq., has returned from Europe. He traveled in England, France, Germany, and Italy, and saw many bee-masters there. He has purchased 200 queens and had them sent on to New Orleans, where he returned on the 27th ult. He brought with him 16 queens, 8 of them died *eu route*. He reports having had an enjoyable trip.

REMOVAL.—In order to get more room for our constantly-increasing museum of implements for the apiary, we have removed our office to No. 974 West Madison St., where we have two floors 20x60 feet each. The Madison street cars (going west) pass our door, making it very convenient for those visiting the city to call on us. Below is a map of the city showing the different R. R. depots, which will assist any one to find our new office.

MAP OF CHICAGO,
Showing the location of the office of the AMERICAN BEE JOURNAL.

EAST,—THE LAKE FRONT.



1 EXPOSITION BUILDING.
2 LAKE STREET DEPOT.
3 LA SALLE STREET DEPOT.
4 WELLS STREET DEPOT.
5 DEPOT COR. CANAL & MADISON STS.
6 DEPOT COR. CANAL & KINZIE STS.
7 DANVILLE & VINCENNES DEPOT.
8 OFFICE OF THE "AMERICAN BEE JOURNAL."

The Madison St. Horse Cars pass our door, No. 974 W. Madison St.

Letters having been sent to our old address will easily find us.

◆

☞ We give up the entire space of this JOURNAL to the National Convention, having sacrificed to it all our departments and a considerable number of essays, letters, answers to questions, etc., that are now in type awaiting our next issue. This must be our apology to *all*, including some who were promised a hearing in this issue.

The American Bee Journal

DEVOTED EXCLUSIVELY TO BEE CULTURE.

VOL. XIII. CHICAGO, ILLINOIS, DECEMBER, 1877. NO. 12.

Editor's Table.

☞ Rubber companies use a large amount of beeswax, in giving polish to hard rubber.

☞ An error was made on page 367 of last issue. Mr. Betsinger claims to be the first inventor of a sectional *box*—not hive.

☞ On Nov. 16th, Messrs. Thurber sold 100 barrels of honey and sent it to Bremen, containing 4,168 gallons net. It was sold for $4,042.96.

☞ Friend Chapman reports that he finds an increased demand for extractors. As soon as the "scare" about *impure* honey is over, extractors will be in lively demand, and at much better prices.

☞ We are assured that not 1,000 lbs. of strictly *white* comb honey can be found in the whole city of New York. We must next year get more light comb honey, and try to supply the demand now created.

☞ Friend Sonne, of Sigel, Ill., has made a small model of his hive, and it is added to our museum for the inspection of visitors. We have also added to our museum the crate used by Capt. Hetherington; the boxes used by G. M. Doolittle, and the Centennial hive made by Dr. Worrall.

☞ We have received a small box of teasel seed and some teasel heads as they are cut for the market, from friend G. M. Doolittle. The plant grows about 4 feet high, and has from 6 to 12 heads on each plant. It takes 2 years to perfect the plant. Friend Doolittle remarks that there are none nearer to his apiary than 1½ miles.

Friend W. J. Andrews has been re-elected to the office of Alderman at Columbia, Tenn., by a handsome vote.

☞ In selecting your list of Periodicals for next year, look over our clubbing list. It will save money to send us your orders for the whole.

☞ Friend Muth, of Cincinnati, says "Extracted honey is getting into better demand every day. We have never sold as much before, as we have this season."

☞ A woodpecker bored a hole in the spire of a church in Jackson, Miss., last spring, and made its nest within it. In the summer, however, a swarm of bees flew to the spire, drove out the woodpecker, and have since filled the interior with honey. And now man, the sovereign dispoiler, has discovered the hoard, and resolved to exhibit the spire, with its novel contents, at the State Fair.

☞ We have printed the "Address to the Public," adopted by the late National Convention, and sent a copy of it to local papers all over the country, asking them to insert it. If our friends will call on the editors of their local papers, and request its publication they will be helping the cause along. If the copy has been mislaid or lost, send us a postal card, and we will send another.

☞ Centennial awards are confusing. Several of our correspondents wish to know how it is that two awards of diplomas were given to extractors, etc. This is the *secret* of the whole affair: Each article on exhibition received a diploma or medal of some kind. There were no second awards—all were first awards. No one receiving any special honor over a competitor. This is the milk of the cocoa-nut.

Bibulous Bees.

The Los Angeles (Cal.) *Herald* has the following remarks concerning the peculiar habits of bees in that State. It says:

> "An immense honey production has grown up in Los Angeles and San Diego counties in the past 2 or 3 years. Every canon and coigne of vantage, in both counties, has its bee farm. Col. Chalmers Scott informs us that the bees in San Diego county have developed a great fondness for orange blossoms and grapes. It was the fashion, formerly, to make 4,000 or 5,000 gallons of wine at Guajome every year, but since the bees have made their appearance the vineyard at that point has failed to yield. The grape forms as of yore, but the juice is sucked out by the bees, thus anticipating the wine press. They dip into the orange blossoms also, and the consequence is that the fruit is dwarfed. A great portion of the feed of bees in Southern California is the blossom of the white sage. It makes a white and agreeable honey. But when sheep have once pastured among the white sage the bees will have nothing more to do with it.
>
> "It is quite likely that, at the next session of the Legislature, there will be an effort both upon the part of the bee men and the sheep men to obtain some legislation from their respective standpoints."

If some of the bee kings of California, preferably those of Los Angeles and San Diego counties, will state the facts, from their observation, they will confer a favor upon our Eastern readers. The truth is what we want.

PRIZES.—Dr. Ehrick Parmly, of New York, wishes us to announce the following prizes (money or medal of equal value) viz.:

> $25 for the best essay on Fertilization in Confinement.
>
> $10 for the best essay on Rearing Queens and Re-Queening an Apiary.
>
> These essays are to be read at the next meeting of the National Bee-Keepers' Association to be held in New York on Oct. 8, 1878. Judges to be appointed by the Association. EHRICK PARMLY.

☞ The Little Rock *Daily Gazette* contains a report of the Arkansas State Fair, and from it we clip the following, concerning honey raising in that State:

> "Dr. Hipolite, of DeVall's Bluff, exhibited a very fine article of honey. The Doctor is a bee-raiser of experience, and he has proved to a demonstration that as good honey can be raised in Arkansas as anywhere else."

Friend Hipolite obtained the highest premium for extracted and comb honey. The latter was in 2-℔. section boxes. One of the judges (a practical apiarist) remarked that it was "the finest honey he had ever seen anywhere." When we were down there two years ago, we thought Arkansas a good State for honey raising, and it seems we were not mistaken.

☞ The Sedalia (Mo.) *Democrat* says:

> "Mrs. Henry Smith, living 8 miles from this city, went into the yard accompanied by her little daughter, a child 7 years of age, to get some honey. The box containing the hive is an ordinary patent arrangement with drawers. In slipping one of them out Mrs. Smith was stung by a bee. The shock and pain caused her to jerk her hand back quickly, and her elbow striking another box, knocking it over, causing it to burst open. In an instant she and the child were literally covered with a swarm of insects, which stung them on the face, neck and arms, and indeed nearly all over the body. Frightened and crazed with pain, they started to run, but they were blinded by the bees, and it was ten minutes before they succeeded in getting into the house and free from the swarm. In less than an hour their faces were swollen out of all recognition, and Mrs. Smith had become insensible from her injuries."

Had Mrs. Smith had a good smoker she would not have suffered thus. No one should go among bees without the means of subduing them close at hand, to be used in case of necessity.

REPORT OF THE CONVENTION.—It is gratifying to know that our getting out a "Special Edition" of the JOURNAL containing the official report of the proceedings of the National Convention, is so generally appreciated. We have had scores of complimentary letters approving our prompt publication of such a full report.

In 1872, $50 were voted to the Secretary for the labor of getting up a report of the National Convention. In the present instance we have produced it, printed in a special edition, without a cent's expense to the Association.

As we offer to send 10 copies for $1.00 (see page 418 of this issue) to those who will distribute them, we hope those who can afford it will take this opportunity of spreading the information it contains to all the small bee-keepers in their vicinity. Such often injure markets through not being posted. In this way apiarists will benefit themselves as well as aid the cause in general.

☞ The *British Bee Journal* in its issue for Nov. states that some of the "spurious Yankee stuff" called "genuine American honey" had been imported into Britain. It says it was "found in fancy bottles, a slice of comb being in the centre" surrounded with a mixture containing 57 per cent. of glucose to 43 per cent. of honey. A shopkeeper in Glasgow, Scotland, on Sept. 27th, was arrested and fined £2 for offering it for sale. Englishmen compare to great advantage with Americans in this particular, that *there* food inspectors are continually watching everything sold as genuine, and promptly discover adulteration, getting it suitably punished. Bro. Abbott is quite right, in remarking: "This is almost as rascally a business as was that in which wooden nutmegs figured some years since." Such "vile stuff" was for years the *bane* of bee-keepers in this country, till driven from our markets by public contempt—consumers demanding "honey in the comb," in boxes or sectional frames, as a safeguard against villainous adulteration.

◆

In reference to that "Royal Funeral" item in the October number, W. E. Hamilton remarks:

> "Mr. H's fancy has transformed a common occurrence into a funeral scene. Let any one kill a queen and leave her body within a few yards of the hive, and in a few hours they may see it surrounded by workers, clinging to it tenaciously."

True, workers do sometimes exhibit considerable devotion to their queen—but that a "funeral procession" is "formed at the hive" and that it "moves in a solid line," etc., is too much exaggerated to be truthful.

If a queen be lost, the bees will go in search for her, and when discovered, the finders will call the rest of the colony. If they hear it, they will go in a body, as that is their usual way of moving. If she is dead, they will quickly return to the hive. From this circumstance, Mr. H. evidently manufactured his "royal funeral" story.

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☞ Thurber & Co. are putting up candied honey in jars for export. Each jar is labeled with the following:—"$1,000 in gold coin will be paid if the honey contained in this jar is found to be impure, or in any manner adulterated." That has the "ring" of true metal about it! Adulteration should be everywhere frowned down.

◆

Many new and valuable features may be expected in our volume for 1878.

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☞ Ch. Dadant sold about 5,000 lbs. of honey in St. Louis, on the 20th ult.

Michigan B K. Association.

The eleventh annual session of this Association will be held in the city of Adrian, Mich., on Wednesday and Thursday, Dec. 19 and 20, 1877. The first session will convene at 2 o'clock p. m. on Wednesday. Notices of the place of meeting will be put up in the post-office, so that those from abroad can easily ascertain the location of the convention.

Adrian is located on the main line of the Lake Shore and Michigan Southern R. R.—one of the best equipped of the great trunk lines—and is therefore easily accessible from all parts of the country.

We regret our inability to give the full programme at this date; but can assure all who are interested in improved bee-culture, that it will be one of the most attractive ever issued by our Association. We may mention that several new and very valuable implements, designed to increase the production of honey and enhance its market value and ready sale, will, for the first time, be on exhibition. They are the result of patient labor and careful experiment of two of our most practical and experienced members, and are, as we think, destined to revolutionize the bee-culture of to-day.

The editor of the AMERICAN BEE JOURNAL is expected to be present and take part in the discussions. Come one, come all, and let us make this session a splendid success. HERBERT A. BURCH, *Sec.*

A. J. COOK, *Pres.*

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☞ Friend Abbott, editor of the *British Bee Journal*, states that C. O. Perrine "did not visit Egypt or Cyprus Island" on his late tour, and that he bought his *varieties* of queens of Sartori, of Milan, Italy. A letter from Mr. P. while in London, stated that he intended to go to both of these places and procure several varities of queens to bring home; hence our mention of it in the A. B. J. for October. We are sorry this original intention was not carried out, and surmise that some important business at home *must* have disarranged his original plans—for on no other supposition *can* we explain his not calling on Bro. Abbott as agreed on his return to England, as we announced. His "sudden" departure for home is the more perplexing from the fact that Bro. Abbott had arranged for a festive "at home," at Fairlawn, and invited some fifty prominent apiarists, on which occasion Mr. P. was to have been the honored guest. Being English ourself, and understanding "the manners and customs" of both countries, we fully appreciate the situation, and exceedingly regret the disappointment. More than one-half of the 200 Queens died *en route*.

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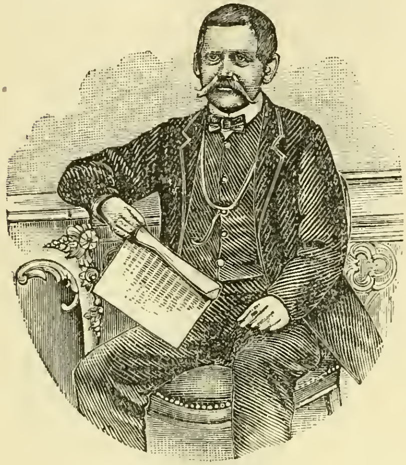
☞ It is suggested that we open a department in the JOURNAL for "Small Fruit Culture," as that is a profitable pasturage for bees. What do our readers say? Is it advisable?

Death of the Baron Von Berlepsch.

A great man has passed away! Our readers will learn with regret that the Baron Von Berlepsch, the great German apiarist, is no more! His memory will be embalmed in the hearts of thousands, all over the world, as one of the kindest, as well as one of the greatest men of the present age.



BARON VON BERLEPSCH.

The following letter from Austria tells its own sad story:

PRAGUE, Austria, Oct. 16, 1877.

THOMAS G. NEWMAN: *Dear Sir*,—I am bearer of afflicting intelligence. Our great bee-master, the Baron Von Berlepsch died at Munich, on Sept. 17, 1877, aged 62 years, after a serious illness of 9 years. If Dzierzon is the inventor of movable combs, Berlepsch is the true founder. His name will be honored as long as bee-keeping exists as a science, and wherever bees are cultivated. While the deceased had no enemies, his friends extended throughout the world.

In my next I will give you a report of the German Apiarian Congress.

Very truly yours,
R. MAYERHOFFER.
Editor of "Bienenvater aus Bohmen."

The following is the verbatim "official notice" of his death:

"Lima Baronne de Berlepsch gives afflicting notice, in her name and in the name of her family, that her beloved husband, Sittig Eugen August Hinrich Gottlob Fredherr Von Berlepsch, honorary member and master of the German Hochsloft of Frankfort-on-the-Main, honorary member of the Association for the increasing of apiculture in Bohemia, and various other bee-keepers' associations in different countries, 62 years of age, after a maiming of 9 years, to-day at 3:30 a.m.—deceased. Munich, Sep. 17, 1877."

Our friend, C. P. Dadant, furnishes the following sketch of his life and labors in connection with his favorite study—the bee:

He was born on the 28th of June, 1815, in Langensalzo, Thuringen. In his biography, published in "The Bee and its Culture with Movable-Frames," he narrates that in his childhood he was fond of bees, and often ran from home to the apiary of a neighbor of his father. On his 7th birthday, his father presented him with a colony of bees. Since that time he has owned bees; and while studying law at the University of Doring (who was an enthusiast on bees) Mr. Berlepsch was permitted to bring with him a few hives, which were placed in the apiary of his professor.

In all the cities where the young Baron was sent to complete his studies, he took with him some colonies of bees. When his father died in 1841, he was the owner of 100 colonies, and had read a great many books on bee-culture and had conversed with some of the best bee-keepers of his country.

When the German bee paper was published he studied the theory of Dzierzon, and 6 or 7 years after, in 1853, he began to write articles on bee-culture. In these first writings he was opposed to Dzierzon's theory of the parthenogenesis of the queen. But Von Siebold having visited his apiary to experiment on the eggs of workers and of drones, Berlepsch was soon convinced and became an enthusiastic supporter of the Dzierzon theory, which is no longer doubted by scientific men.

At the time when the master of American bee-keepers, Langstroth, invented the practical movable-frame hive, Berlepsch, on the other side of the Atlantic, was making a similar discovery. But his side-opening hive (which is yet the most used in Germany, and which had the honor of being selected as the standard by the Italian bee-keepers), is not as easily managed as that of Langstroth.

In 1860, he published the first edition of his work, which, although being one of the best books published in Germany, was burdened with controveries with Dzierzon; as is acknowledged in the second edition, published in 1868. Berlepsch had not the eminent acuteness and the surprising talent of Dzierzon, but his wealth permitted him to procure most of the books on bee-culture published in Germany; his leisure gave him time to read and compile from them what he thought worthy of note, and to have intricate and personal experiments made. It is therefore no wonder that it is one of the best and most complete works on bee-culture ever published. It would be a benefit even to America, if some of our German-born bee-keepers would take the trouble to translate it; it has been translated in Italy.

Many of Berlepsch's teachings would probably be no longer up to the times; he has held many incorrect theories, but his services as a diffuser of knowledge in theoretical bee-culture have been sufficient for his disciples to rank him as second only to Dzierzon.

In 1867, he suffered from an attack of apoplexy which rendered him an invalid for the rest of his life; and the second edition of his work is the result of the valuable help of his wife, the Baroness Lina Von Berlepsch.

* * *

In this issue will be found a Title Page and copious Indexes for the Volume for 1877, which is now ended. By cutting the thread these may be easily taken out and placed in front of the January number, and if not already placed in Emerson's Binder, it is ready for binding. These Indexes show about 600 correspondents, and from 400 to 500 subjects for the year 1877.

* * *

☞ When an old subscriber wishes to *present* a copy of the BEE JOURNAL to a friend for 1878, he may remit $3.00 for the two, if sent during December.

Foreign Notes,

GLEANED BY FRANK BENTON.

ARABIS ALPINA.—A correspondent of *Der Elsaessische Bienen-Zuechter* and the editor of the same periodical, speak in high terms of a plant bearing the scientific name mentioned above, and known to the French as *Arabette des Alpes*, and among Germans as *Alpengaensekraut*. Herr Dennler says "it is covered with bees from morning till evening, and appears to be an inexhaustable source of sweet nectar. It yields pollen also. The snow-white blossoms appear (in Lothringen) early in March and continue through April, furnishing, in connection with the whitish-green leaves a fine effect. It is recommended for borders.

THE following close translation of a letter written by Herrn G. Von Gerichten, of Illkirch, may furnish a lesson in patience and care for some of our careless Yankee bee-owners:

"HOW I SAVED MY BEES FROM DEATH BY CHILLING.—On the 17th of April the sun appeared very beautiful in the morning, the bees buzzed joyously and carried home rich loads of honey and pollen from the fruit trees, resplendent in their beautiful blossoms. Toward mid-day a cold wind blew, impeding the homeward flight of many bees, and in a few minutes the vicinity of my bee stand lay strewn with torpid workers. As is the case with all my bee-keeping colleagues, I cannot knowingly permit a single bee to perish. I put my chilled pets in a glass jar and placed it near the warm stove, and soon had the pleasure of seeing the little fellows, heretofore motionless, move about in a sprightly manner. I gave them all to one of my weakest stocks, which accepted them readily. Thus was I able to save the lives of many bees, and I herewith call the attention of all bee-keepers to the manner."

THE success of the apiculturist depends upon having his hives populous. This is a principle that one ought never to overlook. —*Conlardi.*

A STRASBURG journal notices the appearance in that locality of *Sphinx atropos*, or, as the Germans call it, "Deathshead-swarmer." The same periodical, under the title of "A Honey Thief," gave last year the following notice of this insect:

"At first sight the reader will recognize in the illustration which we give, a representation of the large moth commonly known under the name 'Deathshead,' and which entomologists call *Acherontia atropos*, or *Sphinx atropos*. In the year 1873 we called attention in the *Landwirthschaftlichen Zeitschrift fuer Elsass-Lothringen*, to the nightly occupation of this moth, yet we cannot refrain from again warning all bee-keepers against this enemy; and, as they are very numerous this fall, we advise all to contract as much as possible the entrances to their hives. During the evening hours the Deathshead slips into bee-hives, presses its way, with stormy strength and powerful strokes of the wings, to the honey-cells, sips its fill of honey, and departs in the same manner. The body of the moth is plump and covered with smoothly-laid hair so that the bees are unable to fasten upon it, besides its skin or covering is too hard for the sting of the bee to penetrate; thus, the bold intruder nearly always escapes from the robbed hive with a whole hide and a full stomach. Sometimes, however, the bees succeed in smothering him by crowding upon him in a mass. The remains of such smothered moths are often found in the hives when the spring revision takes place. The Deathshead consumes about a teaspoonful of honey for its evening meal. Be therefore on guard, dear bee-keepers; the foe is there!"

A NEW edition of "*Brehm's Thierleben*" (Brehm's Animal Life) has been issued by the Bibliographic Institute of Leipsic. *Der Elsaessische Bienen-Zuechter* for September devotes over two pages to a notice of the work, which it introduces by saying:—"It is to-day our pleasant duty to call the attention of the bee-culturists of Alsace to this magnificent work, of which German literature may well be proud," and speaks further of it as "the greatest among the zoological works of all nations and all lands, of all times and all languages." It comprises ten volumes.

ONE may be a possessor of bees and still not an apiculturist; and he does not become so, in the real sense of the word, until he puts in practice, in a logical manner, all the means that modern science has shown us.—*Ed. Thiery-Mieg.*

SOCIETE *d'Apiculture de la Marne* is the name of a bee-keepers' association lately formed in Champaigne, just east of the Isle of France, in the latter province Paris is situated.

THE Alsatian bee-culturists propose to publish their journal of apiculture, *Der Elsaessische Bienen-Zuechter*, in the French language as well as in German, provided 500 members will subscribe for the French edition and pay annually 3 francs each. At present, articles written in either language are inserted in the same number.

L'APICULTEUR says that "some California honey has arrived at Liverpool, and is held at 115 francs per 100 kilogrammes." That is about 10c. per lb.

THE HARVEST.—The Alsatian journal, *Der Bienen-Zuchter*, says: "The year 1877 cannot be numbered among the good bee-years."

The old bee-culturist, Herr Breitel, writes from St. Pilt, in Upper Alsace: "This is a good honey year with us."

In the Muenster Valley the yield was excellent during June and July.

From the Upper Loire comes the report that the honey harvest was a good one, and the number of swarms large.

A bee-keeper residing in the region lying between the Loire and Cher rivers, says:—"Swarming has been very great here—the number of swarms reaching 300 per cent.—but the stocks are weak, and if the close of summer does not find them improved, not one of them will see the opening of next spring."

From the provinces on the Somme, Oise, Aisne and Marne rivers, as well as the

Lower Seine, the general reports are that the season has been a very ordinary one—both for honey and increase of stocks.

A letter from a bee-culturist in Savoy, in Eastern France, to *L'Apiculteur*, of Paris, states that the harvests have been mediocre.

"Swarming in our locality has been very good. Nearly all hives have given two natural swarms."—*Rousseau, St. Chislain, Belgium.*

In England, comb honey is not abundant.

WINTERING IN PITS AND CELLARS.—The Vice-President of a Bohemian apiarian society, Pastor Joseph Ehl-Dittersbach introduced, at a convention of bee-keepers, the following question:

"*Has a trial of wintering bees in cellars or earth pits been made; if so, with what result; and is this method to be universally recommended?*"

"This question is one of the most important relating to bee-culture, since the prosperity of the colony depends upon the successful wintering of the bees. Only when we are able to determine upon a method of wintering bees successfully can we lay claim to the title, 'Master of bee-culture.' Innumerable experiments in this direction have been made, and yet one hears, on the opening of nearly every spring, loud complaints that the bees have wintered poorly, since they are troubled with dysentery or are found dead. For example, one of my friends had this spring but 5 living colonies out of 25 put in winter quarters. It is advisable, before discussing this question, to call to mind the points essential to success in wintering.

"As is well-known the honey-bee is a native of the Orient, where, with some slight exceptions, it is able to fly out during the whole year. With us, on the contrary, it is obliged on account of the severe climate to remain in its domicile from 3 to 6 months. In order to make this unnatural condition as light as possible for the bee the following-named points must be observed. It is to be understood, of course, that the stocks to be wintered are populous, healthy, and furnished with a queen not over three years old. The colony must be provided:

"1st. With sufficient food—pollen, as well as about 24 lbs., or about 12 kilogrammes of honey.

"2d. With water to quench thirst and to thin the candied honey.

"3d. With fresh air—so as not to be smothered.

"4th. With protection from severe cold.

"5th. They must remain dry; for too much water, as well as too little, is injurious; too much water produces mold or mustiness in the hive.

"6th. They must remain quiet. When bees are disturbed during cold weather their exertions cause them to become warm, they leave the cluster and are chilled.

"7th. They must be safe from thieves.

"It will not be difficult for us to give a correct decision in reference to the question if we take into careful consideration the above mentioned points."

The discussion which followed brought forth from numerous members the statement that they were highly pleased with the results of their experiments in wintering in earth-pits, while others preferred to place colonies in cellars and watch the temperature. President Budiegizki said that even in severe seasons he had not failed to winter his bees well in straw hives on their summer stands. It was his opinion that before the practice of wintering in pits or cellars could be recommended for universal adoption it would be necessary to collect the facts which a wider experience in this direction would give.

Translated from "Bienenfreund" by F. Benton.

The large Bee, Apis dorsata, of Java.

BY EDWARD CORI, BRUEX, BOHEMIA.

According to the statements of a post officer and a high government official of the Dutch island of Java, with whom I became acquainted in Carlsbad, the surface of this island from the coast some distance inland is, for the greater part, low, level, and covered with tropical productions. The pine-apple, rice, sugar-cane, indigo, vanilla, and other useful plants of hot climates are cultivated in the fields as potatoes with us, the cocoanut palm as with us the fruit tree. In the interior the earth rises into numerous broad terraces, one after another, higher and higher, until, finally, as mountains it becomes very elevated. The higher these terraces lie above the sea level, the milder, and, in comparison with the tropical shores of the island, the more temperate is their climate. It is upon these terraces that the world-renowned Java coffee flourishes. Beyond the coffee-tree region the primeval forest begins, and stretches away to the inner high mountains of the great island. The climate of this forest region is the most favorable one can imagine for plant and animal life; the soil is exceedingly fertile, besides there is much flowing water, and the dews are very heavy. Numerous brooks whose waters are crystal clear, cool, and good-tasting, flow down from the mountains.

Both the officers mentioned could not extol too highly the truly paradise-like beauty and splendor of this terrace region of the island. Everything which nature produces here is larger and more beautiful than elsewhere—is even gorgeous and magnificent. The flora is particularly rich and various, and the blossoms are exceedingly odorous. The animal life is even as rich as interesting; here is the home of the common, the silver, and the golden pheasant, also of the peacock; all of these are wild on the island, and objects of the hunt. The insect life of the island is especially developed, since all the conditions thereto are united in the most favorable manner; butterflies, moths, beetles, and all other insects are distinguished for their manifold colors and beauty, and particularly on account of their striking size.

Good Dame Nature has also produced in this island region, which is so wonderfully favorable to insect life, a peculiar race of bees, the *Apis dorsata*, which could properly be named "the Great Bee of the Island of Java," for it is, as far as is now known, *the largest bee in the world.* The first two segments of its abdomem are dark orange-yellow in color, the rest of them deep black and very shining; the hairy covering somewhat white, very thick on the thorax, and particularly broad upon the abdomenal rings.

This bee is nearly twice as large as our native black bee. A worker bee of this *Apis dorsata* preserved in a vial of alcohol appeared thus to me. The post-officer herein mentioned, visited me after his cure at Carlsbad, and I opened for him a hive in my apiary, showing him the queen on the removed comb, whereupon he assured me that he had found, seeking honey from the flowers, worker bees of the species *dorsata* fully as large as the queen I exhibited to him. Both of the officers told me they had heard from the natives that this bee lives in hollow trees, and is not a wanderer.

Unfortunately, the *Apis dorsata* is not bred or kept by the Javanese; neither is it, in its wild condition, hunted. The Javanese is in too great a degree a genuine Malay—is too simple to raise bees even in the most primitive manner. His hut he builds by erecting four unhewn poles, forming the walls of plaited branches covered with the broad leaves of tropical plants, and adding a roof of palm leaves; some rice, dried fish, and a little cocoanut oil constitute his food, sufficient of which for himself and family he can obtain for a few Dutch kreuzers.

Since the native wears only a kind of cotton shirt on his body, he is not protected from the stings of insects. He fears particularly that of the *Apis dorsata*, because it is very painful and produces large swellings which, with all the attendant inconveniences, last for days. This may be understood by considering that the sting of this bee is likely twice as long and stout, and the poison sac twice as large as those of our native black bee. Since the effect of the sting of the common bee on persons that are not accustomed to the poison of the bee is so great, what must be at first that of the *Apis dorsata?* With the warm climate and peculiarly luxuriant flora of the island of Java the poison of this bee may be of a stronger nature. We well know that during a rich honey harvest in the heat of summer, the poison of the bee is more intense with us than it is in the spring or autumn.

The Javanese fears not only the sting of the *Apis dorsata*, but also its disposition to follow its disturber. These bees angrily pursue in great numbers and to great distances the person who disturbs them in their habitation; and in such cases running back and forth or hiding in thick bushes helps little, for the insects, with certain flight are close upon their heels.

An additional difficulty in the way of obtaining the honey collected by these wild bees rests in the fact that they are accustomed to locate themselves very high—in the hollows of the old giant trees of the primitive Javanese forests.

As a result of all this the Javanese avoid these bees and in no manner attempt their capture. This race of bees receives no attention from the Hollanders who live on the island. They are absorbed in mercantile pursuits, and find in Java numerous other products so valuable and remunerative as to be equaled by few other countries.

Yet this *Apis dorsata* is, at all events, of great worth as a honey gatherer, and possesses for bee-culture in Europe a special, but not high enough valued, worth.

In all portions of our continent there are numerous plants whose blossoming time is long, and that yield honey abundantly, but which have such deep nectaries that our bee, with its short proboscis, cannot reach their sweet contents. Think of a single one of our numerous plants—of our red clover, which blossoms so long a time! What large surfaces in every country, in the plains, as well as mountains, in every village green this plant covers!! What enormous, inestimable treasures of honey our bees must leave uncollected in its blossoms because their proboscides are too short to reach its nectaries!!! Our bee is only able to secure the contents of the small blossom tubes of remaining stunted heads of red clover; the luxuaiant blossoms are of no use to her though they produce the most honey. What a loss this is for our little pets we can judge from the quantity and quality of the honey which they obtain from the smaller blossoms of the white clover, which, unfortunately, is too little cultivated. But the Javanese bee, *Apis dorsata*, would be able to gather stores from our red clover fields, so common everywhere, because she has a proboscis nearly twice as long as a common bee's.

From all this is to be seen what great value the race *Apis dorsata* would possess in Europe—that its importation to Europe would be, not only for bee-culture in itself, but also, in consequence of the greatly increased production of honey, for national economy, a real event.

The importation to Europe of *Apis dorsata* I regard as practicable, and all the attendant difficulties as surmountable, but only in case a practical European bee-culturist, with this object in view, goes to the island of Java and brings the colonies to Europe under his personal care.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

Bee Items Gleaned on our Trip.

A few days since we took a trip to Shelbyville, and Fayetteville, and we will now give a few bee items gleaned *en route.*

At Fayetteville we met for the first time friend Montgomery, who is well known to readers of the bee papers. We regretted very much not being able to visit the apiary of friend Montgomery, but time would not permit. We, however, had a long, social chat with him. He informed us that he had got rid of Gillespie, but that he was out about $85 in the way of lawyers' fees and court costs. Friend Montgomery is a very jolly, good-natured fellow, and in size and appearance, very much like friend Henry Alley, of Massachussets.

At Fayetteville, we also met Mr. Levi Elslich and Dr. W. C. Diemer, both beemen. We also learned that friend McFatridge was in town, but did not meet him.

On our return to Shelbyville we noticed quite a number of apiaries on the road, but did not stop to make the acquaintance of any one but Mr. J. C. Akin, at Shelbyville. We went through Mr. Akin's apiary. His hives are mostly Langstroth, but he has a few of Gillespie's—the first we ever saw. Mr. Akin has a very ingenious mode of locking his hives, his own invention, which prevents any pilfering of boxes containing honey. It is very simple and does not cost over a cent.

W. J. A.

For the American Bee Journal.

Wayside Pencilings.

We have been to the National Bee-Keepers' Convention, and at greater expense perhaps than any one else, but we do not regret it. There were a goodly number in attendance, but we do not believe that there is one who regrets it—for it was a grand success and much good was accomplished.

On our way we were compelled by a break of connections to spend several hours in Cincinnati, which we did in a very pleasant way with friend Muth.

Of the proceedings of the Convention we will not speak, as you have published them in full and they speak for themselves, but there is one matter in connection therewith that we will mention for the satisfaction of those who were present. It was generally remarked and much surprise expressed at the absence of friend J. S. Coe, who was seen only a few hours before the meeting, and who had promised to be on hand. The day after the Society adjourned, we called on friend Coe, who explained his absence by informing us that soon after we parted from him he was taken violently ill and was confined to his bed from Tuesday noon until Friday morning, and expressed regret at not being able to be present.

We were appointed a committee to wait on the Post Master General, regarding the shipment of bees by mail. We called on the gentleman, and exhibited to him the package of bees done up in the usual mailing style by friend Alley, and told him that it was utterly impossible for them to get out, or for mail matter to become soiled, or for any one to be injured by them. His reply was that all did not do them up so well—that if they had, there would have been no trouble about the matter; that some did them up in a very slovenly manner; that mail matter had been soiled and the bees had gotten out of the cages. Our conversation lasted several minutes. We made an appointment to meet him again in the evening at his hotel. We called but he was not in; should have called again had we not been feeling unwell. In what conversation we did have with him, however, we have no expectation of procuring a revocation of the order forbidding their being sent in the mail.

We would suggest that queen raisers and bee-men generally, circulate petitions, directed to their Members of Congress, requesting them to call on the Postmaster General and get it revoked. By this means it may be accomplished. We would add that the Postmaster General received us very cordially and showed us every courtesy possible.

From Washington we went to Chattanooga, where we met friend S. C. Dodge,—a real, live, progressive bee-man. He obtained a hack, into which we seated ourselves, and were soon pulling up the steep sides of Look-Out Mountain. Our visit to the Mountain was made doubly interesting by being so fortunate as having such a guide as friend Dodge, who knows every crook and crevise of it; also being quite a botanist, he pointed out the mountain flora which is peculiar to the mountain alone. Returning from the mountain, we partook of a sumptuous dinner with friend Dodge and his estimable lady.

After dining we took a stroll through friend Dodge's apiary, and then around the suburbs of the city. We spent a most delightful day, and shall ever remember it as one of the most pleasant of our life. We left for home on the evening train, arriving at 10 o'clock the following morning, where we found a large lot of correspondence awaiting our return. W. J. A.

Look-out Apiary.

Friend Andrews: I began the season with one weak colony in a closed-end frame Quinby hive, which I have increased to three. Not having any more hives of that pattern, I had to stop at that point. Later in the season, I procured five other colonies, in different kinds of frames. These I transferred into Gallup frames. One of the colonies soon became queenless, and I used it to fill up the other hives, making four strong colonies consisting of 12 frames each. These four colonies I have increased to 26, making 6½ of each one, besides several nuclei. I used the extractor freely while stores were coming in. I sold enough honey to pay for what foundation I needed, and returned the rest to the bees as they have needed it, and they appear to be in good condition to winter well, averaging nine full frames each. The only expense that I have been to is for hives.

It would be difficult for me to detail to you the many trials that I have labored under "to get the hang of it," but I now feel pleased with the season's work, it being my first in practical apiculture. And right here, I wish to extend my sincere thanks to the several apiarists who so kindly and generously assisted me with their counsel. As a class, I have found them to be generous and unselfish, to a remarkable degree. I had a great deal to learn, but I feel assured that with the experience I have acquired this season in the use of foundation and queen-rearing, that, in any good season, I could increase from one to ten.

I regard artificial comb foundation as invaluable, and the discovery of which should immortalize the inventor.

There is yet another discovery to be made, which will rank with any other in apiculture; that is, an artificial food for bees cheaper than either sugar or honey, to be used by them for brood-rearing without pollen, also for wintering. I regard the day as not far distant. Who will be the first to cry out Eureka! and generously give it to the world, free to all?

The season here began very nicely; plenty of fruit-tree blossoms, then came white clover and honey-dew, then a cessation on about July 1st. The only dependence for forage then was the mint family (*Labiatae*). This just furnished enough to keep up a very moderate brood-rearing. About Sept. 15th, swartweed, golden-rod and astors began to open their flowers, and the fall harvest began in earnest. During the last week the busy workers have filled every cell with precious sweets, and at night their tiny wings keep up a loud and joyous hum, ventilating their hives, and concentrating the nectar—fitting it for their winter food—while the air is redolent with the perfume of the apiary. S. C. Dodge.

Chattenooga, Tenn., Oct. 4, 1877.

Correspondence.

For the American Bee Journal.

Chips From Sweet Home.

I dislike humbugs in any form, and more especially to swindle bee-keepers; not only out of their $5, but the bother and vexation of breeding from an impure queen. Hardin Haines exhibited a one-comb nucleus which he said contained a Cyprian queen and Italian workers, except about one out of 20 to 40 which were Cyprian workers—these he could point out, but to all observers they were just like the balance of Italians, and as there were several hybrids there were no drones.

He told me finally that he could not show me any difference in markings, but that the Cyprians gathered more honey. He offered to send me a queen, agreeing that if she was not better than any queen I had, she should cost me nothing. I also told him if she was better I would give him double his price. If I receive her I will report in the JOURNAL exactly what she proves to be. Why do not some of his visitors report favorable of his Cyprians? I saw several bee-keepers who are acquainted with him, and they pronounce him and his Cyprians, a humbug.

You seem to think the glowing account on page 313 "great exagerations of the facts." Bee-keepers, who ought to know, say that there are *no facts* even, in the statement. He may be posted in bee-culture, but the convention derived no new ideas from him. D. D. PALMER.

Pres. W. B. K. Convention.

Eliza, Mercer Co., Ill., Oct. 6, 1877.

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For the American Bee Journal.

The Express Companies.

On April 18th, we sent by the United States Express Company, to Messrs. Tinklepaugh & Co., of Preston, Minn., to Cresco, Iowa, a colony of bees. Preston is about 20 miles distant from Cresco. On May 4th, Mr. Facey, of the firm of Tinklepaugh & Co., went to Cresco, and was answered by the Express agent, that no bees had arrived for them. Mr. Facey then wrote us from Cresco, urging us to send the bees without further delay. We sent word to the Express Company and on May 18th, Mr. Facey received a card from the Express agent of Cresco, that there were bees at his office waiting for him.

Mr. Facey went to Cresco the next morning and found the bees dead; they had starved. Of course we replaced the colony. Then we wrote to the Express Company, asking if they were ready to pay for the dead colony, at the sight of an affidavit of Mr. Facey, purporting that he had been answered on May 4th, that there were no bees for him at the Express office of Cresco. The superintendent of the Express Company answered that the letter of Mr. Facey, dated and stamped at Cresco on May 4th, together with his affidavit were not a sufficient evidence that he had presented himself to the Express office and that he was ready to follow suit from court to court, if we resolved to sue the Company.

On the 5th of August Messrs. Levy & Baker of the State of Louisiana received from us a box, in which we had sent them three queens. Every compartment of the box were opened carefully under a mosquito bar, but they contained only a few workers and no queens. Several persons were present at the opening of the boxes.

A week later Mr. Etienne Major, of the same State, received also a box of bees from us. This box contained only 11 workers, 3 dead and 8 alive, and no queens. The fact was corroborated by several persons. Of course these four queens had been stolen on the way. We happened to replace these queens, fastening the boxes with sealed strings, to make them robber proof; and we asked the American Express Company if they were ready to pay for these losses.

The Company did not answer our letter; but their agent replied verbally, that there can be no doubt that our queens were stolen; but that the Company does not guarantee against the death or escape of living animals.

Our queens have escaped from the boxes into the hives of one of the Express employes; but if we want to get the value of our losses, we have to incur the risks and annoyances of a law suit. We are resolved to try it. Yet both the Companies, which are so hard and so unjust towards us, have for years, gained several hundred dollars with our goods.

At several times before we have experienced similar losses; we have been, more than at one time, satisfied that our queens had been changed on their way to our astonishment; some times we have had queens missing; but never before had we encountered such a daring thief as the one who has stolen these four queens.

I will not speak of the queens and colonies killed by the Express agent. It would be a long and tedious list to read.

What is the use of these Express companies? They are a nuisance, like a fifth wheel to a wagon and a heavy one at that; with their Presidents, Vice-presidents, Superintendents, etc., who fill their purses without tendering a service equivalent for their high salaries.

In Europe there are no express companies. The railroad employes do the business. Suppose that you desire to bring with you some goods, when journeying by railroad; your goods, here, will be refused; because the railroad companies have made a compromise with the Express Company not to let the travelers bring with them any goods—their trunks excepted.

In Europe you arrive at the station with every thing it pleases you to bring; you take your ticket, then your goods are weighed. You are entitled to 60 lbs free, you pay for the surplus, and your goods are delivered to you on your arrival.

Don't you think that the European system is better?

But here we cannot dispense with such encumbrances as the Express Company; the Fast Freight, the Red Line, the Star Line and several others; all taking good wages for small work. We cannot dispense with such nuisances as long as the railroads will be in the hands of *more than five hundred companies*; which, like the Express, have an *Etat-Major* of costly officers, who have little to do but to pocket our money. This brings me to the idea of the railroad reform, which consists in putting all the railroads in the hands of the Government. No doubt this idea will seem an *utopia* to some of my readers; yet it is, and it will be every day, more among the topics of our times, for sooner or later we will resort to it, as it did begin in Europe. Imagine the post offices in the hands of 500 companies and see what disorder. Do you think that our letters would be as safe, as quickly transported and as cheaply? The putting of all the public services: railroad, telegraphs, insurances, in the hands of the Government, would give more than 50 per cent. of economy, with a better service. Besides, we would gain in celerity, in security and in morality, by the suppression of all the unnecessary wheels which now encumber all these services. I know that, in spite of the press, which is not ready to abandon its privileges of traveling with free passes, in spite of most of our political men, who have sold themselves to the railroad companies by accepting their free tickets, the above question, which is already agitated in private circles, will be a part of the next Presidential platform.

I have a word more to say and I have done. Last year I had a telegram sent to Italy. I was asked 95 cents in gold each word. I had made my figures, they amounted to 75 cents. Then the agent detailed its figures: so much from Hamilton to New York; so much from New York to London; so much from London to Paris; so much from Paris to Italy. "But I don't want that my dispatch be sent to London. It will not be understood by the London agents, and they will make some mistakes. I want you to send my telegram through the French telegraphic company." "It is impossible; my company does not correspond with the French line." The result was, that after costing 20 cents more per word, my telegram was mispelled; two words could not be understood.

Such are the fruits of competition in public services. Higher rates and bad work.

CH. DADANT.

For the American Bee Journal.

Nil Desperandum.

I suggest a new column in the JOURNAL; instead of blasted hopes let us call it hopes realized. To initiate the movement, I will give you my experience in bee-culture:

In the spring of 1871 I procured my first bees, consisting of four colonies, three of which died in wintering, leaving me with one weak colony the following spring; that year they did not swarm nor make any box honey, however they survived the following winter. By dint of good luck and a very little managing, in a blind sort of way, I succeeded that season in obtaining one new colony, but they gave no box-honey.

The spring of 1873 found my bees alive. Encouraged by this, I purchased two other colonies.

The truth had gradually dawned upon me that there might be some magic in skill, as well as in good luck. I now invested in bee literature, subscribed to the different bee publications, and commenced bee-culture on a scientific basis. The result was that in the autumn of that year I had increased from four colonies to eleven, and obtained a little honey.

The winter following, five colonies died, leaving me six; these I increased before the next autumn to 16, and secured $75 worth of honey. Five colonies of these went to the happy hunting ground, in wintering, leaving me 11. I then whistled up my courage to the tune that "there's luck in odd numbers," which maxim I proved by increasing my bees to 23 colonies, and obtaining from their labor $100 worth of box-honey.

The spring which followed shone upon 16 colonies in my apiary, these I increased to 21, two of which died in wintering. I sold two colonies. I discovered one colony to be queenless; to this I added a weak one and they built themselves into a strong garrison.

To begin the season of 1877, I had 15 vigorous colonies; these I have increased to 28, and now that the season is at an end, I find on counting the spoils, that my little workers have yielded me, since last apple-blossoming, 1,300 lbs. of prime box honey, worth at my door from 22 to 25c. per lb.

J. H. KENNEDY.

Homer, N.Y., Oct. 2, 1877.

[No new column is needed. "Hopes Realized," as well as "Blasted Hopes," find a place. The A. B. J. is the organ of no clique or party, and will give all a fair and full chance to "tell their experience" in "committee of the whole."—ED.]

Southern Kentucky Association.

This Association held its semi-annual meeting at Glasgow, on Wednesday, Oct. 3d. Dr. N. P. Allen, President, and Jas. Erwin, Sec. pro tem.

After prayer, communications were read from C. F. Muth, Cincinnati, O., and P. P. Collier, Benton City, Mo. On motion, the thanks of the Society were tendered to these gentlemen for their valuable communications.

At the request of the President quite a number of persons united with this Society.

The President appointed the following committees:

Arrangements—N. H. Holman, S. S. Duvall and S. T. Botts.

Exhibition—J. G. Allen, T. E. Shelton and E. G. Martin.

State of Bee-Culture—W. L. Dulaney, Wm. Cook and N. N. Greer.

Questions for Discussion at next Meeting—T. W. Sears, H. W. Sanders, S. T. Botts, Asa Young and W. W. Wright.

The following questions were then taken up: "Can there be any improvements on the two-story Langstroth hive?"

Mr. J. G. Allen thought the Langstroth hive good enough.

Mr. Wright thought a wire-cloth bottom to the hive an advantage; had some hives of that style and found a great many moths under the wire-cloth; thought it a good plan to catch them.

Mr. Shelton thought moth-traps a delusion and calculated to mislead bee-keepers.

Mr. Sears agreed with Mr. Shelton.

Mr. Ellis used two entrances, one at bottom and one at top of brood chamber; had noticed that the bees went in at the bottom and out at the top entrance.

Mr. Shelton used frames 9x12 inches; objected to the length of the Langstroth frame.

Dr. Allen had used none but Langstroth hives; thought others might be used with equal success; considered it very important to have all the hives in the apiary the same size.

"How to secure straight comb?"

Mr. Shelton took small bits of comb or wax and stuck along the comb guide and sides of frame.

Mr. Sears raised the rear end of the hive several inches highter than the front, and found it an advantage in securing straight comb.

Dr. Allen thought comb foundation might be used to advantage for this purpose.

Dr. Botts succeeded in securing straight comb by using a wax-comb guide.

Adjourned to 1:30 p. m., when the Secretary read the following essay from Dr. Botts, of Barren Co., on

PLEASURE AND PROFIT OF BEE-KEEPING.

To the intelligent bee-keeper there is real pleasure in the care and management of bees, and they are almost sure to become his favorite stock—his pets. He will derive more satisfaction in the apiary than anywhere on his farm—save his family circle. See him as he moves about his hives, observing each one, and seeming to notice almost every bee that passes in or out; how intently he sits down by the side of a strong colony in time of a plentiful harvest and watches the heavy-laden workers as they fall wearily on the bottom board, or on a leaf, or sprig of grass at the entrance, to rest a moment before going in to deposit the rich burdens in their beautiful combs.

He loves to see them as they rush in and out on their busy errands, bringing in delicious nectar, red and golden, yellow or white pellets of bee-bread or pollen; all have something to do. All are busy, busy bees. Go into the fields and gardens with him and watch them as they fly from flower to flower in quest of the sweets which nature fills them with; see how industrious, never stopping to rest. When we open a hive and find it filled with nice comb and honey, how beautiful it is! We take out the comb piece after piece and look it over with pride and satisfaction to see with what unceasing energy they have labored and filled their home with rich treasures.

We now go into the lower department of the hive and there we find still more of the wonderful workings of the colony; here we see, perhaps, one or two frames of honey and pollen on each side; between these the brood-nest—the nursery. Here are thousands of eggs and young bees in all stages of development; the queen, slender and graceful, moving about majestically among her progeny, respected and honored by all. Wherever she goes we see the others make room for her, while she is constantly surrounded by a circle of admiring workers. How interesting she is as she moves over every part of the comb in search of empty cells in which to lay. Here, also, are bees too young to work in the fields, busily engaged in feeding those still younger, and preparing and depositing in cells the jelly-like substance on which the larvæ subsist. While they are thus engaged, others are at work hermetically sealing those cells containing brood far enough advanced to be sealed.

It is pleasing and interesting to look on and see all this, and it affords a great deal more pleasure to the apiarist than any one else, because he understands and appreciates the work they are engaged in. We enjoy the swarming season because it is not only interesting, but exciting. I do not see how any one who loves bees, or has anything to do with them, can keep from becoming excited when a swarm is on the wing. Their hum is musical and fascinating to every lover of bee-culture. To see them rush pell-mell from the hive as if driven from it by the cry of fire, and fill the air with a loud roaring noise for some time, and then selecting some suitable branch of a tree, settle in a large cluster and hang there almost motionless, unless swayed to and fro by the wind, has a charm about it that has to be seen and felt to be realized. When the swarm has settled, how eagerly do we go to work to hive it, not because we do not wish to lose it, but that we enjoy it. Almost all the work we have to do in the apiary is pleasant; there is nothing irksome about it. It is light and pleasant enough for ladies to engage in, and we should encourage them to take part in promoting bee-culture.

Aside from the pleasures of bee-keeping, the profits are far greater than can be realized from the same amount of capital invested in any other stock. Say bees pay an average of 20 per cent., then would not the profits exceed those paid for the use of money at common rates of interest? But we know by past experience that, when well managed, they hardly ever pay less than 100 per cent., and often as much as 500, and it requires but little extra time for any one to successfully manage from 10 to 20 stocks of bees.

The most expensive part of bee-culture is at the beginning. We have to buy bees, hives and other apiarian supplies, but when once bought, if well cared for, they will last almost a life-time.

By getting our bees in good condition, and giving them the necessary care, we may confidently expect to be well paid for the expenses we have incurred and the pains we have taken. To illustrate: Last spring I purchased four colonies, two of them very strong and two weaker, for which I paid $12.25. They were all in log gums; I transferred them as early as possible, and from one of them I extracted over 100 lbs. of fine honey—enough to more than pay for all of them. Besides, each one of the four gave me a large swarm, paying in honey and increase of stock at least 400 per cent., the best one of the four paying 600 or 700 per cent.

From 12 colonies I extracted 700 lbs. of honey. I have doubled my number of colonies, by natural and artificial swarming. There are very few pursuits in which we can invest a small amount of capital and make such handsome profits as in bee-culture. It has been well said of bees that they "are the only servants that work for nothing and board themselves."

To be successful, and make this avocation both pleasant and profitable, we must study it; for unless we understand how to properly manage our busy little insects we will soon meet with losses that will discourage us. We should also love the business, which we are very likely to do, if we know how to conduct it.

A little enthusiasm also will add to our success—hence the language of Prof. Cook: "Show me a scientific bee-keeper and I will show you an enthusiast."

Having cultivated a love for bee-keeping, become successful in it, and realized the pleasures and profits of it, we may say:

"Thou cheerful Bee! come, freely come,
  And travel round my floral bower;
Delight me with thy wand'ring hum,
  And rouse me from my musing hour.
Oh! try no more those tedious fields,
  My honied treasures all are thine;
Come, taste the sweets my garden yields.
  The bud, the blossom—all are thine."

On motion, the thanks of the Society were tendered Dr. Botts for his valuable communication, and it was ordered to be printed with the minutes.

REPORT OF COMMITTEES.

Your committee on the State of Bee-Culture report that so far as it is advised the culture of bees throughout Southern Kentucky is greatly improving—as much in the number of those engaged in it, as in the methods employed. The public attention has been attracted by the many publications and discussions concerning it; and while your committee speak more advisedly in reference to Warren and Barren counties, it is informed by persons in other counties that at no period has the culture of bees been so prosperous. The early harvest this year was splendid in some localities; in Cumberland Co. the late harvest was even more so, and the fruitful yield of honey has attracted the attention of many who have not heretofore worked with bees. Every bee-culturist knows the extreme fascination there is in the pursuit; and, added to this, the erection of regular places of sale and the creation of a regular market for the product will greatly assist further progress in this particular.

William Dulaney,
W. Cooke, Com.
I. N. Greer,

We, your Committee on Apiarian Supplies, beg leave to report that there have been exhibited at this session of the Society the following articles:

From T. G. Newman & Son, Chicago, Ill., Cook's Manual, Hunter's Manual, King's Text Book, Benedict's Honey Bee, Kretchmer's Guide, Hill's Artificial Swarms, Wintering Bees, Dzierzon Theory, Muth's honey jars, Van Dusen's bee feeder, Emerson's binders, honey knives, three sizes of Bingham's smoker, Alley smoker, comb foundation, registering slates, and honey labels.

From C. F. Muth, Cincinnati, O.: his extractor, and Langstroth hive.

From R. A. Alexander, Smith's Grove, Ky.: an extractor.

From J. G. Alexander, Grider, Ky.: a bee smoker.

From Mrs. Nancy Greer, Glasgow Junction, Ky.: bee veils.

Where two of a kind was exhibited there was not always unanimity of opinion as to which was best, or the most reasonable in price, but in no case would either fail of its purpose; the individual taste of the bee-keeper would alone determine a choice. The books exhibited were standards of art, and reasonable in price, and every bee-keeper ought to have some of them. We recommend the American Bee Journal published by T. G. Newman & Son, at Chicago.

T. E. Shelton,
Jas. G. Allen, Com.
E. G. Martin,

QUESTIONS FOR DEBATE.

Your committee would submit the following questions for debate at next meeting:

1st. What is the best honey-producing plant?

2nd. What is the best method of wintering bees?

3rd. How shall we dispose of our surplus honey?

4th. What is the best method of raising and introducing queens, and what time of year?

5th. What distance apart should hives be set in the apiary?

6th. Which is the best—natural or artificial swarming?

7th. How shall we prevent bees robbing?

H. W. Sanders,
W. T. Sears,
S. T. Botts, Com.
A. E. Young,
W. W. Wright,

On motion, the various reports were received and committees discharged.

The following officers were elected for the ensuing year:

President—Dr. N. P. Allen; Secretary—H. W. Sanders; Assistant Secretary—Jas. Erwin; Treasurer—W. W. Wright.

The next question was then taken up:—"What is the best method of transferring bees?" Dr. Allen described the process at length, and remarked that no beginner can do this as it should be done—it required an experienced hand.

Dr. Botts endorsed Dr. Allen's method, and recommended strips of wood for fastening comb in frames.

W. W. Wright thought fruit-blossoming time the best season for transferring.

Moved and seconded that the Langstroth hive be recommended as the best in use. Carried.

The following resolution was offered and unanimously adopted:

Resolved, That the members of the Southern Bee-Keepers' Association tender their thanks to the city of Glasgow for their generous hospitality; to Prof. Mell and the young ladies for their sweet music, and also to those who have kindly furnished apiarian supplies for exhibition.

On motion, the President and Secretary were requested to have the minutes of this meeting published in the American Bee Journal and the Glasgow *Times*.

The convention then adjourned to meet at Glasgow Junction, on the first Tuesday in May, 1878, at 10 a. m.

N. P. Allen, *Pres.*

Jas. Erwin, *Sec.*

From the Dominion Poultry Gazette.

Care of Bees in Winter.

Many successful apiarists contend that there is no better way to winter bees than to allow the hive to remain isolated in the yard where they were kept during the summer and fall; and they point to their success in many years past for reliable evidence to corroborate the correctness of their assertions. The fact that bees have been kept satisfactorily in the forgoing manner, does not prove that such a practice can be recommended as the best under all circumstances, for hundreds have attempted to keep their bees without proper protection during the winter, and have lost nearly every hive.

There is one fact in which intelligent bee-keepers will agree, viz., that a colony will winter best when the hive is kept in a location where the temperature will not be quickly affected by the rapid transitions from warm to very cold, and *vice versa*. One thing in particular should be guarded against, that is: no hive should be placed where it will be exposed, even for a single hour, to the rays of the sun. When a hive stands in the sunshine for a few hours, the wall or sides will be heated up, the little workers will be enlivened and the pleasant outlook will invite thousands of them to spread their wings and fly away to the fields. But, alas, before they have flown many yards, they will become chilled to such an extent that they will drop to the ground and perish, as they cannot recover sufficient strength to get back to their homes.

This teaches us the importance of guarding every hive from the fury of fierce winds and also from the cheerful sunshine. When the hive is in an isolated place it needs a cover to turn the rain and snow, and boards, rails or brush, placed on every side of the hive to obscure the light of the sun and to break the force of the cold wind. So long as bees are kept in the shade, well protected, where they can discover little or no light, the temperature of the interior of the hive will be more uniform, and only a limited number will escape from the hives and perish. P. H. GIBBS.

For the American Bee Journal.

Sundry Thoughts on Bee-Keeping.

It is an old saying, "In time of peace prepare for war." The season for active operations amongst the honey bees is past, they having been placed in proper condition for winter ere the issuing of the Dec. number of the JOURNAL. "Procrastination is the thief of time," and one of the greatest faults of the apiarist, therefore it is well to prepare for the next season's campaign, first by giving forethought to the subject matter in hand, then proceed to action. At our leasure hours we can repair and prepare our hives and surplus honey receptacles, review our bee literature, become masters of the science to the full extent of all present knowledge that has been published.

There are new subjects and thoughts in this connection that may be worth a passing notice, consideration and investigation. I notice in the JOURNAL that a Mr. Oldt, of Pa., has devised a very simple process by which bees may be caused to hive themselves. I have examined it thoroughly, caused a model to be constructed, and have full confidence that it will work every time. Now comes in this connection the question, how can we prevent their swarming themselves to death in common box hives?

A neighbor of mine is under the necessity of destroying ten swarms in an apiary of 25, —too small to winter. If the mother hive was placed in a dark, cool cellar on the evening of, say the ninth day after the first swarm will not all the young queens have emerged, if they so remain at the end of say 8 or 10 days confinement, and will they not have their fight out and have killed all the young queens except one? At the expiration of which time we should remove them to their old stand.

Will not the fact that they gather no honey during the confinement be one cause of their killing their surplus queens? It may be objected that we are confining our bees just at the best honey season for the term of eight days, is it not far better than to let them swarm themselves to almost certain destruction?

These thoughts are for those that keep their bees in the common box hive or gum. I have had no opportunity to test it since the suggestion, but am of opinion it will accomplish the object. E. ROOD.

Wayne, Mich., Nov. 8, 1877.

For the American Bee Journal.

Shipping Bees.

My bees were prepared for shipment by removing the top and super and folding one-third of the honey cloth, which was heavy ducking, back and replacing with wire-cloth. The whole was thoroughly tacked down so that no bees could get out. Entrance covered with wire-cloth; top inverted and hive set into it right side up. The bees were prepared on April 22 and 23; hauled five miles in a lumber wagon, and placed aboard an Ill. Central R. R. car at Alma, Ill., on April 24th. Arriving here 4 days later in a severe snow storm, I allowed them to remain in the car until May 1st, when the snow disappeared, and I removed them two miles into the country and set them on their stands at once. The day being warm, and bees but little excited, I opened the entrance, which was soon discovered and warmly welcomed by the little prisoners.

Number shipped, 72; received in good condition, 67; starving, 2, which swarmed out the following day and entered other hives; and 3 were *hors de combat*, probably froze. On May 3rd I began to feed 20 of the lighter ones and continued so until May 16th, after that the flowers yielded honey in sufficient quantity to enable them all to get a living. J. N. MCCOLM.

Plymouth, Wis., Oct. 20, 1877.

From Dominion Poultry Gazette.

A Bee Hunt in Florida.

We were all comfortably seated at "Magnolia Grove" one evening, engaged in talking over the prospects of the orange crop, when we were suddenly interrupted by a loud knock on the outside door. "Come in," said the planter. The words were hardly spoken when the door was opened by a large darkey, who, with hat in hand, stalked into the middle of the room and paused in front of our host. "Well, Pomp, what is wanted?" said the planter. "I've done gone and found 'em, sure," was the reply. "Found what, Pomp?" said our host, forgetting a previous conversation he had with old Pomp. "Why, de bees and honey, doesn't you disremember, massa, how I tole you I was goin' to look in de swamp for dat swarm you has lost last season, massa Stevens?" "O, yes, Pomp, I had entirely forgotton it," was the reply. "In the morning we will go out and find them, and bag the honey. Now, Pomp, you may go," and as the old darkey retired, the planter inquired of us if we would like to go a bee hunting. Of course, we replied in the affirmative.

The next morning found us up bright and early, and at the table it was thought best to go to the swamp as soon as the hands could be got together. In about an hour old Pomp and about five or six of his African companions put in an appearance, armed with axes, pails, one or two bundles of rice straw and a sufficient quantity of brimstone to kill all the bees in the State. "Where is the swarm?" inquired our host of Pomp, who carried an axe sufficiently large enough to have delighted the followers of Richard, the Lion-Hearted. "In de cyprus; 'im near de brake," was the reply. "Lead the way, then,"—and off we trudged through the cane fields, until we reached the edge of the swamp.

"Dat's de tree, massa," said Pomp, at last, as we reached a large cyprus that had doubtless raised its head aloft for many years, above its fellows. We gazed at the tree in silence, and at a height of over 20 ft. or more from the ground, discovered a hole from which the bees were going in and coming out. "Down with it," said the owner of the cyprus, and the words were no sooner spoken than Pomp and Black Jake "laid too" with an earnestness that was quite surprising.

The tree was no sooner down than Pomp moved cautiously towards the bee-hole in her side, and after taking due observations, gave it as his opinion "dat de ole tree had a powerful lot of honey in her." "You had better chop into her side," said the planter, addressing Pomp, who had taken the precaution to stand at a safe distance from the cyprus. "Pears as how I'd like to know where de honey is lodged," said Pomp. "I reckons as how its above de hole, but I dosen't zackly know," queried the old darkey as he mounted the trunk of the tree next the hole, keeping a sharp look out in the meanwhile for any stray bees that might be flying round. Pomp raised his axe and struck a few well-directed blows, and at length a considerable opening was made in its sides. In the meanwhile the boys (or hands) had fixed a long pole to a bundle of rice straw and filled it with brimstone, so as to destroy the bees. Pomp had no sooner cleared off the last chip from the tree, than the bees sallied out in numbers to see what the intruders were about.

Pomp gave one jump and landed a rod from the tree, pitching in to the darkies like a mad bull at a herd of strange cattle. We all got away from the tree as fast as our legs could carry us, and watched at a short distance the doings of the honey makers. At length the straw was lighted and young Moore, who "wosen't affeared," approached the tree and thrust the flaming brand into the cavity. It blazed away in right good earnest, the brimstone emitting a rank odor, as if doing thoroughly its work. At length it was all consumed and the long pole withdrawn. A few bees only flew around the hole and their entire destruction seemed well nigh ensured.

Pomp now put on a pair of gloves, and putting some coarse netting over his head, mounted the tree and soon found the coveted sweets. The honey was considerably jammed by the fall, but was of excellent quality and of sufficient quantity to well repay the trouble of getting it. The buckets were brought up, and Pomp took it out, the pails being moved away by the little darkeys, all anxious to help now that the bees were "clean gone." Four right good buckets were filled, and the boys gathered up a quantity of broken and refuse comb for "de chilen of de plantation." We now wended our way back to "Magnolia Grove," the older darkies singing a lively song, while the younger ones were filling themselves with the product of the old cyprus. E. R. Billings.

For the American Bee Journal.

A Novel Experiment.

I conceive it is the duty of every reader of the Journal to contribute to its columns every item which may come within the range of his personal observation which savors of the "new." Not that anything is absolutely *new;* but because a great many things which are perfectly familiar to some may be absolutely new to others less favored by circumstances or long experience. And by so doing each may contribute his "mite" to the fund of general, useful knowledge. This is my only apology for troubling the readers of the Journal with the following:

On yesterday, Sunday, Oct. 14th, in our latitude, 131 miles north of Cincinnati, the thermometer, at 1 p.m., stood at 77°, and the day was every way lovely; yet my pets seemed torpid; and while watching a nucleus which had a virgin queen of sufficient age to take a "bridal tour," I discovered a commotion at the entrance of the hive for some ten minutes, as if her virgin majesty intended to explore the outer world; but it soon became quiet. I then visited two other nuclei which had virgin queens of the same age, but all was quiet—they were nuclei from which I had removed queens, intending to unite them, but had neglected it until they had reared queens. I then thought to try the effect of warming the hive up, by feeding a little warm honey to one. The effort worked like magic, for in less than five minutes the whole colony had lost its temper, and in a very short space of time her majesty appeared at the entrance and made a fruitless effort to fly—her wings were defective.

I then tried the same experiment on the remaining two nuclei, which had, up to that time, shown no symptoms of the commotion which usually attends the departure of a queen on her mating flight; and in less than five minutes both queens appeared at the entrance and departed on their aerial voyages. One returned in about 3 minutes while the other was on the wing about 10 minutes, and when she returned she bore evidences of fertilization. I was unable to ascertain whether or not the other one left the hive again, but on examination an hour later I found that she had become fertilized. From every indication neither of the queens would have left the hive on that day, but for the stimulating effect of the warm honey; and I think I am not claiming too much to say that I owe the fertilization of two queens to the novel experiment.

This may be a familiar proceeding to many apiarists, but it was new to me, having never seen it spoken of in the JOURNAL in a reading for some years. If so, it can do no harm. If there are even some who, like myself, were ignorant of the effect of feeding thus, it may be of great service to them in a like emergency. J. E. RICHIE.

Lima, O., Oct. 15, 1877.

For the American Bee Journal.

Imported Queens.

Ever since bees were first imported from Italy we have heard that imported bees and queens are dark. Well, I have found this so, until within a short time. Beautiful and high colored queens have been found in Italy, and they have found their way to this country, too. I have such queens, and am sorry that I did not get them earlier in the season. I find them as prolific as any queens, and the workers very peaceable and quiet. I was always of the opinion that such queens could be found in either Italy or Germany.

Now that the price of imported queens is so low most any one can afford to have one or more of them. Bee-keepers should introduce more or less new queens into their apiaries, each year; the money paid for them would be well invested. I don't like "in-and-in breeding." I have reared 2,000 queens from one mother and not 100 drones. Not one of her daughters were ever fertilized by any of her male progeny.

H. ALLEY.

Central Kentucky Association.

This Association met in Forresters' Hall, Lexington, Ky., on Monday, Oct. 8th, and elected officers for the ensuing year, as follows:

President—Prof. James K. Patterson.

Vice-Presidents—H. C. Herspuryer, Jessamine Co.; Thos, Hayes, Fayette; John W. Bean, Clark; Dr. L. S. Mitchell, Bourbon; Wm. Boone, Woodford.

Secretary—W. Williamson, Lexington.

Treasurer—J. M. Holman, Fayette.

On motion of Dr. N. P. Allen, the following committee was appointed to draft a constitution and by-laws for the government of this association: H. C. Herspuryer, J. M. Holman and W. Williamson.

The committee reported, and on motion the constitution and by-laws as offered were adopted.

Dr. Allen delivered an interesting address on bee-culture, and spoke of Mr. Doolittle, of N. Y., and his wonderful success in apiculture, having taken 11,177 lbs. of honey, part comb and part extracted, from 67 colonies of bees in one season. He confirmed Mr. Doolittle's statement by his own success; referred to Mr. Harbison, of California, as being the greatest bee-keeper in the world, having shipped at one time last year to New York, the enormous quantity of ten car-loads of honey. The Doctor's own experience taught him that bees can be as easily controlled as any other stock on the farm when properly managed. An ordinary colony of bees in a Langstroth hive consists of from 20,000 to 25,000. He used the Langstroth hive exclusively, and a resolution passed by the Southern B. K. Association (of which he is president), recommended the exclusive use of the Langstroth hive as superior to all others. He thought ladies ought to be persuaded to take a deeper interest in bee-culture, the great fear seemed to be that of being stung, but modern appliances were such that the most delicate lady in the land could work with bees with perfect safety. His association has a great many lady members, and his impression is that the success of an association of this kind depended a great deal on the interest taken in it by the ladies; and as ladies are admitted to membership free of all expense, every married member should have his wife join, if not married have his sister join, and if he has no sister have some one else's sister join. He was in favor of young men going into bee-keeping and making a life study and business out of it, and is of the opinion that the day is not far distant when apiculture will be taught in colleges as commonly as any other branch of education.

Mr. Herspuryer being called, said he had very little to say after so many good things said by Dr. Allen, and said correctly, but would merely relate how he became a bee-keeper. Some years ago his wife persuaded him to get some bees; and accidently about that time, a swarm passed over his farm and was captured. From that day his interest was aroused. He bought King's Text Book, then subscribed for a bee paper; bought some Italian queens and a few colonies of bees, in all amounting to about $100. His neighbors laughed at him and his speculation, and if he had failed, the "I told you so's" would have haunted him to this day. But the first season proved a success as every other has with him since, and the consequence was it established him a hero in bee-culture at once. He cautioned beginners about being over sanguine, as bee-keeping must be pursued with some love for the business, and adaptability of the person to the business, and this pursued intelligently for success.

Mr. Williamson said the thanks of this association was due Dr. N. P. Allen, of Warren Co., for the deep interest he has taken in this association, having traveled over 200 miles, on a common invitation to be with us, without any compensation whatever, while many bee-keepers within hailing distance had failed to attend.

Motion carried, and President Patterson, in behalf of the association, tendered thanks to Dr. Allen in eloquent terms for the interest he had taken in this association, and the general advancement of the success of apiculture.

On motion, Dr. N. P. Allen was enrolled as an honorary member of this association.

Mr. Williamson, on honey - producing plants, said the subject of honey-producing plants is a theme of such vast importance, that I feel it a duty to call the earnest attention of every bee-keeper in Kentucky to aid us in and through their practical experience inform this association from time to time, the most profitable and best honey-producing plants adapted to this climate.

The names of honey-producing plants are legion, first among them for profit on the farm, is alsike clover, which has only been introduced in this country but a few years, and is considered by the best judges to be superior to all others both in hardiness, productiveness, and general adaptability as a farm crop. The Chinese mustard plant is considered by some, as profitable a plant as can be sown. The common catnip, that is generally despised as a worthless weed, is one of the very best honey-producing plants that grows, and every bee-keeper should look with tenderness on these little weeds and encourage their production rather than destruction. But sweet mignonnette is the queen of all honey-producing plants that bloom from June until December. This of all other plants ought to be raised to a certain extent, by every bee-keeper without exception. Not only for its unrivalled honey-producing qualities, and the splendid aromatic flavor of the honey thus produced, but for its beauty and fragrance. When it is planted or sown to any extent, our atmosphere will vie with the spicy breezes of Ceylon. I might enumerate and eulogise the good qualities of a thousand honey-producing plants, trees and shrubs, that are ornamental and useful, but, in fact, there is hardly a plant that grows that does not produce honey. I merely mention these few to set you to thinking over the subject. With one kind word for the "busy bee," hoping the time is not far distant when all who keep a garden of flowers may welcome the little worker as kindly.

"Thou cheerful bee! come, freely come
  And travel round my floral bower;
Delight me with thy wand'ring hum,
  And rouse me from my musing hour.
Oh! try no more those tedious fields,
  My honied treasures all are thine;
Come, taste the sweets my garden yields,
  The bud, the blossom, all—all are thine."

There was quite an interesting display of apiarian supplies on exhibition, such as bee-keepers' text-books, bee papers, and many things necessary to the successful management of an apiary.

On motion, the next place of meeting will be in Lexington, the first Tuesday in May, at 10 a. m., and hereafter regularly on the first Tuesday in May and October.

W. WILLIAMSON, *Sec.*

For the American Bee Journal.

Doolittle's Report.

I have just read an article in the last issue, from G. M. Doolittle, Borodino, N. Y., to which, with my experience, observation and information, it is difficult to give full credence. I do not say, for I do not know, that what he says is not true, but it sounds to me much exaggerated.

He says he commenced this season with 67 stocks; that his honey season commenced June 18th and ceased Aug. 25th—two months and 7 days. That in this time he took 10,284 lbs. of box honey from 45 stocks, and 893 lbs. of extracted from 2 stocks—one stock yielding 566 lbs.,—that 3 stocks yielded respectively 288, 301, and 309 lbs. of box honey; that one colony yielded in 3 days 66 lbs.; that during his honey season of 67 days, his 67 stocks averaged 166¾ lbs. each, being 2½ lbs. for each colony per day; that in addition to all this his stocks had increased from 67 to 152, all in good condition for winter, and having, of course, 25 to 30 lbs. each, which would make his average yield per stock about 192 lbs. He concludes by saying, that for the last 5 years, with an average of 50 stocks, he had cleared $6,000.

Now, Mr. Editor, if all this is true, Bro. Doolittle's name should be changed to Doo-*much.* If it is not true, he ought not to have written such an article, and you ought not to have published it, for it will induce many into the bee business, resulting in failure and loss. JNO. FOX.

Columbia, Tenn., Oct. 16, 1877.

[We cannot doubt friend Doolittle's correctness. The report is large, but he has for years made a good report each season. There is so much difference in seasons as well as localities, that what looks almost impossible to some, may, with everything favorable, be easily accomplished by others. We expect a full report of his management in a future number of the JOURNAL. He is building now and preparing for winter, when that is over he will prepare an article on his mode of treatment and management. —ED.]

One signing himself "A Novice," writes from Otisco Valley, N. Y., Oct. 12, 1877, and remarks as follows:

"Mr. Doolittle says basswood opened on July 14th and lasted until the 28th, which with teasel yielded abundantly. This is undoubtedly correct, but he claims this to be white honey. Basswood, we all know, yields abundantly the very finest of honey, but teasel honey is very dark, as dark as West India molasses, much darker than buckwheat, and is of a very strong flavor. I have lived in a locality where much teasel is raised. Dullness of trade has stopped the farmers growing it, much to the joy of bee-keepers in this locality. This must not be understood as a slur on friend Doolittle, it is not; thinking his report might induce some to plant teasel for honey, I write a word of warning. If teasel will not pay to grow for market, it certainly will not for honey.

"My honey crop has been very good. I commenced the season with 59 colonies; increased to 110, and got, in cap honey, 4,698 lbs., which is about nine-tenths white."

[The honey we saw in New York, exhibited by friends Betsinger and Doolittle was not *dark* honey by any means—and they aver it was gathered from teasel. Will friend Betsinger tell us more about the teasel and its honey, for our next issue?—ED.]

For the American Bee Journal.

Marketing Honey.

Perhaps the readers of the JOURNAL would be interested with a brief sketch of how we marketed our honey this season. We live 12 miles from the railroad, and had to haul our honey that distance on a spring wagon. Our honey was shipped by freight and went through to New York in fine condition. We placed in the front of each car three bags of sawdust, laying them on the bottom and against the front end. Then we placed two tiers of crates on the bottom of the car, then three bags more of sawdust, then two tiers more of crates, and so on until the car was filled, when bags of sawdust were crowded down at the back end of the car. Thus it will be seen that the sudden jar while coupling the cars was all obviated, which is the only jar sufficient to break honey in transit.

We gave the sawdust to Thurber & Co., but afterwards learned that we could have sold it for $7 to $9. The sawdust cost us nothing for freight. We supposed we knew how to handle honey, but when we saw Thurber & Co. put a whole car load (9,000 lbs.) on one truck and haul it to their store, we concluded we knew nothing about it.

We found Thurber & Co. to be gentlemen in every sense of the word. They do not ask a man to wait for the pay for his honey, but as soon as it is delivered the cash is ready. We would advise bee-keepers having honey to sell to correspond with them.

G. M. DOOLITTLE.

Borodino, N.Y., Nov. 5, 1877.

For the American Bee Journal.

Open Letter to Prof. A. J. Cook.

DEAR FRIEND.—Let me thank you for your candor and honesty in treating the subject upon which we differ so widely. Though I cannot think you right upon this subject of supply and demand, I am pleased to think you honest and unbiased by any personal interests, which is more than can be said of many praisers of the business.

I think L. C. Root's reply to your claim of a great deal for a little, also honest and entirely correct. Such remarks as yours, above referred to, if they should be spread broadcast, and be generally believed, would be the ruin of many now prosperous apiarists, and nearly all of the new beginners that would embark. It is not foundation nor extractors that has produced so much nice honey in such marketable shape, lately, but a certain enthusiasm and care only found among specialists.

Many of our most successful honey producers use no modern appliances, but much prefer comb honey production to the use of the extractor, and will not use foundation in any shape. One says "foundation is a failure in the brood chamber;" another, that "it is not fit for boxes;" others that they don't want it at all. Some of those that are "getting on" fastest, raise comb honey almost exclusively, and assure us that its production is the most profitable. That lands us back to where Langstroth stood, 20 years ago. For my own part, I consider both the extractor and foundation of use in some places, but it is only a nonessential at present. Now it strikes me that the enthusiasm of specialists is the very thing we should cherish, and to preserve that they must have remunerative prices for their productions, and they cannot accumulate a fair share of these productions unless they can have the honey "field" to themselves. No matter how much honey brings, if we have none to sell. If foreign countries take all our honey at good prices, then the next squabble will be for location, as it is in California where the bee-ists want Congress to grant them so many square miles, instead of quarter sections.

Jasper Hazen is nearer right, on the matter of over-stocking, than popular opinions. How much we might do to help us on in the business, if most of us were not all interested in, and full of middle-men's labors.

Now, friend Cook, allow me to say that I think you will have more occasion to feel "nervous about the knees" ere many seasons, than you have yet. California's disaster came to our rescue this time, and our home crop is small—but isn't it better to pray that men may never enter our ranks, than to rejoice in their failure, in order that we may succeed?

It seems to me that as long as honey is produced by specialists, and not too many of them and too close together, we may expect to see honey in every market in nice shape, selling at prices that will pay for labor and study for putting it in such shape. We may also expect to see bee papers and conventions supported and attended. We may also rest assured that useful supply-dealers will always find customers that will have money to pay for what they buy. But on the other hand, if every farmer, mechanic and invalid, in fact everyone who has failed at other pursuits, is induced to try bee-keeping—until such are driven from the field by the natural law of "the survival of the fitest,"—we shall see plenty of honey in tubs and pails, slopping about every grocery, selling at prices below cost of production, as in years gone by. Let us meet to further the interests of those already engaged, and let us like men welcome all volunteers, and we will see the consumption and demand keep just in advance of production, and consequently keep our business healthy, and our ranks composed of successful and reasonable men.

"One volunteer is worth two conscripts," both to himself and those around him. A specialist knows too much to crowd his bees into a field already occupied. He does not wish to spite any one, and if he did, he knows too much to "bite his own nose off to spite his face!" It is a pleasure to discuss a subject in which one feels so much interest, with one who feels just as much interest on the other side; and heaven knows I am open to conviction, and desire to be put right, wherever I am wrong, without delay.

JAMES HEDDON.

Dowagiac, Mich., Nov. 7, 1877.

For the American Bee Journal.

Comb Foundation.

Some difference of opinion still exists in regard to foundation, as to what extent and advantage it can be used. I would report the following experiment with nine sheets, 12x12. Last year I tried a few sheets, but as they were not pure wax, and the season too far advanced, I took them out, after several days, untouched. I made an observatory hive this year, with nine American frames; tacked the foundation on the top bar, tapered slightly on the sides down, and ⅜ inch from the bottom of frame. I took the queen and all the flying bees of a strong Italian colony from my park apiary and took this colony to my home in the middle of the city, and had them in the hive containing foundation at 8 in the morning, with a box of honey on top from which the bees could help themselves, which, however, they did not need. The first day was pleasant, the second rainy, and at 6 p.m. I looked at them, when the bees had become so reduced in number in the sugar houses that they had almost left the two outer combs; they had, however, stretched the cells about ¼ inch over half way down. The third day was very warm; having omitted to shade the hive in the evening, the combs had sagged a little; this I cut off, and placed the two outer combs in the middle. On the fifth day every cell in the hive was worked out almost to its full size. I have no doubt that in the comb-building season a strong colony would leave no cell untouched within 3 days, with pure yellow wax foundation having the right sized cell.

About Sept. 12th, I took five small strips of foundation of the same kind, filled a one-comb 5x6 surplus box with it, placed it between other boxes on a colony which was working a surplus. About the 20th they had patched up the strips into a straight sheet, about an inch thick, and filled it with honey. A sheet of white foundation used the same way, they made no use of; it requires more heat to work it out than does the yellow wax. C. H. Leittgens.

Our Letter Box.

Carson City, Mich., Oct. 9, 1877.—"This has been the poorest season for honey ever known in this part of Michigan. We had eleven very poor days for honey last June; nothing since. Have now only enough to keep them in fair condition." H. Roop.

Burlington, Kansas, Oct. 8, 1877.—"I examined my bees yesterday, and found them in splendid condition for winter, all strong in bees, with considerable brood. I put in side packing 2½ in. thick of chaff for winter. My hives have double ends, the spaces filled with sawdust, cushions at sides and on top. They ought to winter well on summer stands here." J. W. Henderson.

Chicago, Ill., September 10, 1877.—"Mr. Editor: The Italian nuclei hive I got of you is in first-class condition for winter. When I got it home, I found it had about 300 bees, 5 drones and a beautiful queen. She is as yellow as gold and the most beautiful one I ever saw. Her progeny are like herself, beautiful. I let them remain in the small frames they came in, for 3 days and then put the 4 frames into one Langstroth frame, gave them a frame of brood and two frames of surplus honey from another hive. It has now 2 Langstroth frames of brood and 2 of honey, and as many bees as would make 10 nucleus colonies. I shall want an imported queen next spring, and several hives." F. McDonnell.

Jefferson, Wis., Nov. 2, 1877.—"The honey harvest in this locality has been about half a crop; the spring being too cold and wet. I had to feed nearly all of my bees until the middle of June, when white clover commenced blooming. They gathered considerable surplus honey from white clover and basswood, but stored none from fall flowers. My honey crop this season was between 9,000 and 10,000 lbs.—about half of each. I sold all of 'my comb honey at 16 to 20c. (except about 600 lbs. I have yet on hand). The comb honey in sections such as Doolittle uses, only smaller, without glass, I sold all at 20c. per ℔. I have 350 colonies in good condition for winter, but they are on their summer stands yet, and to-day we have snow here." C. Grimm.

Binghampton, N.Y.—"Friend Newman: The proceedings of the National Convention in regard to marketing honey and the essays on that subject should be sown broadcast among bee-keepers, especially those who have but few hives and little honey; they are the ones that do so much damage to the honey markets by selling small lots at any price offered. In that way they spoil the market for large producers." J. P. Moore.

[It was that such persons may be *educated* up to their duty—that we were enduced to publish that "Special Edition" containing the full report of the National Convention—and now in order to get them into the hands of such persons we will make a liberal reduction in the price by the quantity. They cost singly, 20 cents each; but we will send 10 for a dollar, postpaid, to any one who wishes to distribute them, and thus aid in the *education* of small bee-keepers—thereby saving the honey markets from being sacrificed by the ignorance or inadvertance of the unwary.

When remitting for next year, let all who can, send an extra dollar and get ten of the Special edition for distribution. We send out hundreds of copies every week, *free of cost*, to such persons, and there are no doubt many who will be gratified to see this suggestion, and will gladly avail themselves of the opportunity of doing good to themselves and the cause generally.—Ed.]

Wyoming, N. Y., Sept. 10, 1877.—"I saw an article in the August number of the A. B. J., by James Heddon, in regard to comb foundation. My experience has been very different from his. I used some last spring in transferring, to fill out some frames where I lacked good worker comb, and it worked to my entire satisfaction. I noticed one comb when it had been in just long enough to be filled with sealed brood that contained 6 drone cells and about 7,000 worker cells, nearly ready to hatch. Another frame was solid with brood, and had only one drone cell. Other frames of it have worked in about the same way. The foundation I use is made from pure yellow wax, and I have had it drawn out to ½ inch in thickness in 8 hours after putting it in the hive, and eggs in it in less than 24 hours, and that in the month of May when nights were cool and bees were getting honey but slowly. I agree with Mr. Heddon in respect to Italians *vs.* blacks. I have failed to see any Italians that would beat some of my black swarms, and others of them seem bound to just make a living, but I have been raising queens from my best swarms and replacing the old ones, and I think I more than get paid for my trouble in nice comb honey. Our season here has been very short; first a light run of clover, then a light run of basswood from July 14 to 23, and after that a little buckwheat. I have taken about 50 lbs. of comb honey per hive, and no increase; and am now getting my bees ready for winter, in the hope of a better season next year." A Beginner.

Ridgefield, Conn.—"The past season has been the poorest for honey that we have ever known. Our 32 stocks were very strong in the spring, and increased by natural swarming to 46, but we have taken only about 200 lbs. of surplus honey this season." S. W. Stevens.

Winnebago Co., Ill., Oct. 22, 1877.—"My bees did well; I had 3 stands last spring, and increased to 6; got 30 lbs. of extracted and 450 lbs. of box honey. My bees would have done better but for the dry weather in July. I like Italians best, because they are more peaceable. I purchased a fine queen of H. Alley, in Sept. I would not be without the Journal for anything."
M. Adams.

Camden Point, Mo., Oct. 28, 1877.—"Have increased this season from 9 to 28 colonies. The crop of honey was fair; below the average in the spring, but after Aug. 20th, good. I only took the actual surplus, leaving them large supplies for winter. I have 1,000 ℔s. of nice honey; it sells here for 16⅔ to 20c. per ℔. I shall infuse new blood into my apiary next spring. May the Journal live long and prosper."
Tom M. Moore.

Breakabean, N. Y., Nov. 8, 1877.—"I had 65 colonies last fall; lost 1, the bees killing 2 or 3 queens after I had given them a frame of eggs several times. They all did well till March 25, a warm day with south wind, when nearly all my bees went out, but few returning—the wind blew them to the ground, and they perished. The last of June my barn was destroyed by fire and I lost 3 swarms then. From 40 colonies I got 1,700 ℔s. It is usual for many colonies to be lost by going to the woods, but I never lost one in that way. I do not unite weak stocks; I can make them all strong."
Wm. B Burgett.

Strait's Corners, N.Y., Nov. 5th, 1877.—"I could not do without the Journal in the management of bees. My bees did very well. I commenced the season with 10 colonies in box hives; increased by natural swarming to 34; doubled down to 28. My young swarms I put in hives 12x12x14 in. deep inside, with stationary bars at the top. Several of my young swarms stored in the 2½-℔ Isham box, 22 to 70 lbs. each. One first swarm stored 83 lbs. Some of my old swarms stored from 10 to 25 lbs. each, after casting 3 swarms. I intend to use the Langstroth hive next season. The honey crop was rather light in this section."
Isaac E. Pelham.

Vermont, Ill., Oct. 7, 1877.—"I had 75 colonies of hybrids and Italians on May 1; 15 of these I made into 2 nucleis each, in order to raise queens. Of the 60 left, 15 were weak, leaving but 50 to run for honey. I imported some queens from Italy—3 of them were impure; proving conclusively that there are black bees in Italy. A Cyprian colony, with its increase, gave 346 ℔s of honey. Average for all hives, 80½ ℔s., which I sold at an average of 18c. Total amount of honey sold, 4,227 ℔s.; cash received for honey, $760.80; for queens, $417.60; for swarms, $208.50. Total, $1,386.90. Cash paid out, $886.90—leaving me a profit of $500 over all expenses." H. Haines.

Garden Plain, Ill., Sept. 29, 1877.—"The season for surplus having closed, bees generally are in good shape for winter. I will give results for this season. I commenced with 75 colonies; 10 of them light in bees, the rest strong, but with scanty stores. I had to feed to keep up brood-rearing; they did not get honey enough to supply their wants, before the second week in June. I increased to 105, and took 4,000 ℔s. of honey—1500 ℔s. being comb, mostly in section boxes. I am selling to the consumer: extracted, 12¼c. per ℔.; comb, 16c. to 18c. I think if my health had been good, through June and the first of July, I could have had 1,000 ℔s. more, as some of them crowded the queen too much, and there were a few poor queens that needed changing; but where the queens were all right, they are still raising plenty of brood to have young bees to go into winter with."
R. R. Murphy.

Springfield, O., Oct. 16, 1877.—"Friend Newman: I just reached home last evening, from a trip to the northern part of the State. I went with my own conveyance, and so saw a great many hives, and lots of them empty; and the universal cry was 'poor luck.' I saw hives 7 or 8 in. square inside and over 3 feet high, and the owners complained of 'poor luck!' strange isn't it? I saw on Oct. 12th, box hives of from 3,000 to 3,500 cubic inches over-run with bees and so full of honey that I could just lift them, but could not step with them (and I'm stout too, weighing to-day, with light clothes, 202 ℔s.), and the owner had 'poor luck,' no box honey; but if better counsel don't prevail, brimstone will bring the honey. My bees have done pretty well this season, but not as well as last. I have adopted Alley's plan for introducing queens with tobacco smoke, and have not had a failure yet. Some Italian queens I got of Alley have produced as fine bees as I ever saw. Success to the 'old reliable' Journal. A. B. Mason.

Wayne, Mich., Nov. 8, 1877.—"At the National Convention, in a paper there read, some one gives 'Mrs. Tupper's plan' for making artificial or forced swarms. It is given in the third edition of Langstroth, p. 180 and 181 (also, if my memory serves me, in both former editions). My impression is that the third edition was published prior to the time Mrs. Tupper engaged in bee-keeping at all, certainly the first editions were. Perhaps Mr. L. stole it from Mrs. Tupper, as Mr. King informed said convention that Langstroth pirated the invention of the movable comb or frame hive. Perhaps he will be so kind as to inform us why some of these noted and prior inventors did not use their own inventions until Mr. L. gave to the world a detailed description of *their hives?* That is a question the answer to which would be extremely edifying to beginners. I think these gentlemen came as near the discovery of a practical movable frame as Samson did, and no nearer. There is a model of one of them at Washington (by Munn, I think), with as near the same plan (so far as the movable frame is concerned) as the ribs were to frames in Samson's lion—to wit, with a hinge at one end! Seriously, why did not some of this array of original inventors use their own inventions instead of attempting to pull down the temple built by others?" E. Rood.

Barren Co., Ky., Sept. 27, 1877.—"We have had a good honey season this year. I began in the spring with 6 colonies, some of them in poor condition. I have received 400 lbs. of extracted honey, and doubled my number of colonies, which are rich and full at present. We have a rich honey-dew; bees are doing well. Success to the JOURNAL." JOS. T. GRAY.

Moultrie Co., Ill., Oct. 19, 1877.—"But few of those who keep bees here are bee-masters. I began 3 years ago with one colony of Italians; I now have 19, and a good stock of surplus honey. I get from 20 to 25c. per lb for it. I am delighted with the Italians. I use the Langstroth hive with two honey boxes covering the entire top. White clover and smartweed are our main honey plants; linden yields but little. A. M. RHODES.

Mohawk, N. Y., Nov, 17, 1877.—"FRIEND NEWMAN: The Quinby hive at the American Institute Fair was not made or exhibited by me, as stated; it was made by Geo. Ellison. The hive and boxes were much inferior to those known as the new Quinby, and now used by us, and were placed on exhibition by A. J. King for no honorable purpose." L. C. ROOT.

Putnam Co., Ill., Nov. 16, 1877.—"My 233 stands have gathered for this season 1,200 4-lb boxes of honey, and gathered up to Oct. 4th in abundance. I had a sale of bees on Oct. 13th, and sold 35 stands—the lowest price was $7, and the highest $11.25. I have been selling honey at 12½c. We are all well pleased with the AMERICAN BEE JOURNAL. I shall try and get all the subscribers I can for it." OTTO HALBLEIB.

Canandaigua, N. Y., Sept. 18, 1877.—"I bought 15 stocks last year in box hives, but not in time for surplus honey. I Italianized them; buying queens of J. H. Nellis, at $1.50 each. I bought bees early last spring, in box hives, and increased my number to 58 stocks; transferred to the improved Quinby hive. Forty-five stocks were in medium condition; the remaining 13 stocks made no surplus honey. This season I have 3,200 lbs. of comb honey, 100 lbs. of extracted, 25 lbs. of wax, and 12 stocks increase. I prefer the Italian bees to blacks. I have taken 150 lbs. of comb honey from some of my Italians, while the best blacks made only 80 lbs. I took 90 lbs. of comb honey from one Italian stock; then it swarmed; the swarm filled its hive, and I took 60 lbs. of comb honey from the two stocks, making from one stock and increase 150 lbs. of comb honey.

"It was through taking the JOURNAL that I received your advice to use small sections for surplus honey, instead of boxes; by so doing I received 3c. more per lb on 2,100 lbs, making $63 in my favor—enough to pay for the JOURNAL for my lifetime, perhaps, as I intend taking it that long, if I can get it. I shipped 2,700 lbs. of comb honey to Messrs. Thurber & Co., of New York. It is a good house; I would advise those having honey to sell, to ship to them. My honey crop brought me $625, besides an increase of 12 stocks and 25 lbs. of wax. I fed 100 lbs. of sugar last spring. All but 4 of my stocks have enough honey to last them to the beginning of next season. I keep them from swarming by cutting out the queen cells. I bought some queens of T. N. Hollett, this season—one was a drone-laying and one a black queen—both sold as pure Italians and tested. I would like to hear from those who bought queens from him, this season, whether they were purely mated, etc. Dr. Andrews, of this place, has had some experience with him, but not of a satisfactory nature. The *Fanciers' Journal* has published him as a dishonorable dealer with fowls; is he not the same with bees?" G. C. SODEN.

Sandusky, N. Y., Oct. 6, 1877.—"DEAR EDITOR: Thinking that you would like to hear from this section, called 'Cold Cattaraugus,' I send you a few lines. The season for bees has been better than an average one. My Italian stocks commenced swarming the last of May, which is nearly a month earlier than usual, June 22d being about the average date; and the season closes with basswood, so what we do in the bee line must be done quickly. The bee business has not yet fully revived from the low state in which it was left by that bee disease which used up nine-tenths of all the bees in this and adjoining counties. I commenced last spring with 60 stocks—50 Italians and 10 blacks—in fair condition; I increased to 86 and took 2,200 lbs. of box and 300 lbs. of extracted honey. I used a section-box weighing when glassed for market 2½ lbs. My best Italian stock gave one swarm on May 28th, and from the two I had 175 lbs. of box honey. The best Italian stock that I kept from increasing gave me 150 lbs. of box honey. From the two best black stocks, not increased, 190 lbs. of box honey. My Italians have done best in all respects, and are in better condition for wintering." A. A. BALDWIN.

Grimes Co., Tex., Sept. 9, 1877.—"Our honey in July was good, though dark; our August honey is hot, or rather smarts the throat after eating it awhile; it is gathered from the wilk-weed, or, as the poet calls it, 'the summer snow.' It covers the prairies, and when in full bloom, at a distance, resembles snow. It grows from 2 to 6 ft. high, according to the quality of land; half its height is one straight stalk; it then spreads its branches in every direction; it flourishes best in dry weather. If it could be utilized, it would be a valuable honey plant with us. Since the fall rains have set in, other blooms are getting plentiful, and they have stopped gathering honey from it. They are now working on the morning glory. I have on hand 2,000 lbs. of the hot honey; what to do with it I do not know. If there was a chemist convenient I would have him find out whether it could be utilized or not. I send you some to experiment with." IRA M. CAMP.

[The honey *can* was received, but not a drop of honey did it contain. We had to pay 71 cents extra postage on it, and were much disappointed on finding the can empty. Its being encased in wood made it heavy enough not to cause us to suspect its being empty. We do not know what is the best disposition to make of your *hot* honey. Will some one having experience with such, give some light on the subject?—ED.]

"Granville, O., Nov. 8, 1877.—Mr. Newman: There is considerable discussion here about the legality of using the 'American' bee-hive. I am not personally interested, as I never had an American hive in my yard; but a man by the name of Cruixshank has been levying a tax on every one who has an American hive in this county. I claimed to him that Mr. King had in 1873 made all his patents public property, consequently if I had any desire to make or use an American hive I should do so. But Cruixshank claims that he bought this and other territory before Mr. King made his patent public; and he still has a valid claim on all who make or use the hive in the territory he purchased of Mr. King previous to his giving his patents to the public; that Mr. King had no legal right to this county, and could give no one a right to make his hive here, as he did not own the territory. Will you please give us all the benefit of your opinion in the next Journal? and no doubt it will serve persons in other localities as well as this, who are about to make their hives for next season. Cruixshank has published a card in our county paper, warning all those who use the American that he will prosecute them for a farm right."

W. H. Sedgwick.

We would answer that the "American" *is still a patent hive.* In November, 1873, Mr. H. A. King announced that his hives were "public property in all unsold territory," which he then stated comprised "about ninety-nine one hundredths of the whole United States," and adds: "By this announcement we remove every restraint from the use, manufacture and sale of our hives in all *unsold* territory." He could not donate the patent to the public in counties he did not own.

By a letter just received from Rev. H. A. King, we learn that Mr. Cruixshank purchased a few counties in Ohio *before* the event of his donation to the public—his claim therefore is technically *legal.*

The Langstroth patent has expired—it is public property everywhere.

Davis, Mich., Nov. 13, 1877.—"My third years' report is as follows: After losing 40 colonies during winter and spring, I had but 14 left, which I have only doubled, but have put in, during the spring and summer, enough to make my number now to 64 colonies—all in good condition, with plenty of honey to winter on. I have taken 3,006 lbs. of extracted and considerable comb honey (I kept no account of the comb honey). I find ready sale for my honey at home at 15 to 18c. per lb., and 10c. for comb honey taken from old hives when transferring. I make my price on honey at the commencement of the season, at about what I think will be a fair rate and living profit, and as yet have found no difficulty in making sales. I have not quite 600 lbs. on hand. It will soon be all gone, and at a fair rate. I have been very busy over the hives this season, trying to make up my losses, and think I have done it. If not I *think* I have, and that is just as well. We should not brood over misfortunes but keep our minds and hands busily engaged in building up, and we may soon recover our losses. I have been reading the transactions of our National Association, and am very much interested in them. I am glad there are so many scientific men engaged in apiculture. When I read the American Bee Journal it seems to me that we fairly meet with each other in relating our experiences."

W. P. Evritt.

Allamakee, Iowa, Nov. 12, 1877.—"Since Messrs. Thurber offered a prize for "the best honey in the most marketable shape," I have watched with greatest interest for the report of the committee appointed to decide as to the merits of the different exhibits of honey placed on exhibition, with a view of competing for the Thurber medal. In the current number, the Journal has favored us with the report and decision of the committee, also with a short description of several of the different lots of honey offered for the inspection of said committee, with cuts of shipping crates, hives, extractors, etc. In the next Journal please give a minute description as to size and style of construction of the boxes or small packages so successfully used by Messrs. Doolittle, Hetherington, et al. Are all or any of them covered by letters patent? I run my apiary exclusively for box honey; have at present 50 stands of bees, and if I have ordinary success in wintering I shall undoubtedly need considerable storage capacity for surplus honey next season. I like to keep up with the times as regards boxes and other fixtures. Accept my best wishes for the financial success of the Journal; it is the bee-keeper's friend." C. A. Luce.

[The Doolittle box (or cap) is 6 in. high by 5 in. wide inside, and 1¾ in. between the glass; which is put on after the boxes are taken from the hive. The side pieces of the box are 2 in. wide holding in the glass, with the assistance of 3 tin triangles driven into the top and bottom and bent over the glass. A saw groove in the top is intended to fasten starters. Capt. Hetherington's cap of boxes is patented; his crate is not—neither is the Doolittle box.

The Hetherington crate is 8x16 in. by 6 in. deep, inside, and contains 12 of the above boxes; glass at each side of the crate, showing the honey; held in by a 1-in. strip (¼ in. thick) at top and bottom. A wabble-saw cut on each end serves for handling.—Ed.]

Wenham, Mass.—"I see on page 335, Oct. number, C. A. Graves thinks I am careless in shipping queens. I am as liable to make mistakes as any one—and by an oversight sent his to N. Y. instead of O. I had some 200 orders when his was received on June 4 (not May 4 as he stated), but to oblige him, filled his order 10 days before it would come in regular order—sending his on June 27. I don't ask Mr. G. to lose the $1; he can have it 'on demand.' As to friend Glenn, I think he had reason to complain. There was a slight misunderstanding about his order, but he had another queen sent Aug. 20, before his article appeared in the Journal. I want to say that I am ready to settle all differences by private correspondence without troubling the A. B. J." H. Alley.

Bellwood, Pa.—"What is the best mode of treatment for sour honey? Will it make vinegar? F. M. GLASGOW.

[The only remedy we know of is to keep it till needed, and then feed to the bees; they will remove it from the cells and make it sweet in a little while. It is worth too much to make into vinegar, still it can be done—one part of honey to five of water will be the proportions.—ED.]

Wethersfield, Ct., Oct. 27, 1877.—"In the season of 1875 I purchased queens of H. Alley; some were good, but not all. One was detained in the post-office for 13 days, the clerks failing to recognize my address on the package; but she was received alive. In Sept. I received from him 3 queens; one was dead when received, there was no delay this time, and one was a poor hybrid. I wrote him the facts at the time, expecting that he would make the two queens good. I received this short and perhaps singular reply: 'Queens are played out for the season.' Not feeling satisfied with Mr. A., I sent orders for queens to other parties, the next spring. This displeased Mr. A., and now he does not recognize my claim, but sends me *no little* abuse whenever I remind him of it." H. L. LANKTON.

Sumter Co., Ala., Oct. 11, 1877.—"Will it do to keep honey in tin? Do drones feed themselves? Will honey sour when not extracted till capped? Can you refer me to a honey market? What kind of barrels are best to ship honey in?"
A SUBSCRIBER.

[Tin cans are good honey vessels. Drones feed themselves. Such honey will sometimes sour; when it does, feed back to the bees. New York is your nearest good market. Thurber & Co. will buy all you have for sale. Any good, hard wood barrels, if clean, will do.—ED.]

Borodino, N.Y.—I notice in the Report of the National Convention that Mr. Betsinger stated that black bees stored the honey that was awarded the Gold Medal; thereby leaving the Convention and your readers to conclude that I keep black bees. This is not so; I have not had a colony of black bees in five years. I should be exceedingly sorry to have the idea prevail that black bees produced better honey than the Italians, and that their honey was so much superior as to have the Gold Medal awarded to it, when apiarists of the 19th century have taken so much trouble to import pure Italians.
G. M. DOOLITTLE.

Starkville, N. Y., Nov. 22, 1877.—"I have sold my honey to Messrs. Thurber & Co., of New York. Instead of taking the 30 days for payment as I offered, they sent me a check for the entire amount. It is a pleasure to do business with those who do as they agree to, but they have done even better. Their extensive business seems to bear testimony to the fact that business relations so satisfactorily established are more apt to prove permanent and profitable to all concerned. It is a pleasure for me to recommend them to enquiring bee-men."
P. H. ELWOOD.

Notes and Queries,

CONDUCTED BY
PROF. A. J. COOK, LANSING, MICH.

Henry Station, Tenn., Sept. 29, 1877.—"Enclosed find a flower of the smartweed that produces honey so plentifully. And also another plant—please name them."
J. P. PARKER.

The former is *polygonum incaratum.* It is nearly related to smartweed. The latter is *eupatorum* or bone-set. The specimen is too poor to tell the species.

Galesburg, Ill., Sept. 21, 1877.—"Enclosed send sample of a wild plant, on which I saw a lot of bees at work yesterday. Were they gathering honey or pollen? It has a square hard stem; the top is bushy and it blooms profusely." H. B.

It is *scrophularia nodosa.* They were no doubt getting both honey and pollen from it. It is too large and coarse a plant, with flowers too few and small to be very valuable to cultivate for bees.

Fanning Co., Tex., Sept. 21, 1877.—"I send a sprig of our best fall honey-producing plant. What is it? I have taken 85 lbs. of honey from one colony, and it is full again. I shall have 30 lbs. more." S. S. LYDAY.

Its name is *Eupatorium*—the species uncertain—it is a poor specimen.

Jennings Co., Ind., Sept. 26, 1877.—"We have had the best honey season for the past month that I ever saw. I enclose a specimen of our best honey plant. Bees are storing largely from it." WM. MARTIN.

It is an aster—the specimen has no lerves. Specimens should contain not only all kinds of leaves, but the leaves should be spread so as to show when dried. Some of these plants were such poor specimens that my coleague, Prof. W. J. Beal, one of the very best botanists in the country, could not indefy them.

Union Co., Ill., Oct. 13, 1877.—"I enclose a specimen of our best fall honey-producing plant. It begins to bloom just before the golden-rod ceases, and continues till hard frost. The honey is white and I think just as good as clover honey. What is it?"
E. B. BARKER.

It is one of the species of 50 or 60 asters that grow east of the Mississippi River. They are all good honey-producers.

Libertyville, Mo., Nov. 8, 1877.—"DEAR SIR: Enclosed find seed and hull from a stalk about 2½ to 3½ ft. high, white flower, blooms in Sept. What is it? Bees did tolerably well here. I had over 100 lbs. of comb honey from one colony of Italians, having a daughter of one of Dadant's imported queens." J. B. DINES.

It is a species of aster—a good plant for honey.

New Orleans, La., Sept. 18, 1877.—"I enclose 13 samples of our fall flowers. Nos. 1 and 4 bloom from the middle of May till end of July. They grow on swamp land and among the heaviest swamp timber. Goldenrod and aster grow both in swamps and on open land. The latter is our stand-by for winter supply. The rest grow only in swamps, and bloom from Sept. 15 to Nov. 15. A swamp running parallel with the Mississippi River from 2 to 40 miles wide contains particularly Nos. 1, 4, 7, 10 and 13. Wet weather prevents bees from getting large amounts of honey from them. This season has been the poorest ever known—not ¼ as much surplus as common—but gave 60 per cent. increase." W. B. Rush.

1. *Cephalanthus occidentalis* (button-buch); yellow flower, size of white clover; gives amber honey.
2. *Cuphorlia oltissimum.*
3. *Solidago* (golden-rod), 50 species east of Mississippi River.
4. *Vitis bipinnota.*
5. *Pluchea foetida*—marsh flea-bone.
6. A poor specimen—no leaves.
7. *Mikania seandens.*
8. *Milkania*—climbing bone-set.
9. *Iresine eeosiordes.*
10. *Baecharis halimfolia*—grounded tree.
11. Morning glory.
12. *Lythrum lineare*—loose-strife.
13. *Polygonum.* There are 22 species east of the Mississippi River.

"Dear Editor:—Enclosed I send you a specimen of a new honey plant, which grows wild in great abundance in this region. My attention was called to it last season, by seeing the bees working on it from morning till evening. It commences to bloom about the middle of July and continues to bloom until frost. There is as much again of the plant growing this season, as there was last year. After the plant commenced to bloom my bees get much of their honey from it.

"Enclosed I send a communication from Jas. A. Simpson to *Gleanings in Bee-Culture*, which gives a full and accurate description of the plant I refer to. I sent a specimen to our State botanist a few weeks since, in order to learn the name of the plant, but as yet have not heard from him. Can you give me its name? I do not know how it will do under cultivation, but intend to sow one-half acre in the spring.

"Bees did not do well in this vicinity during the spring, owing to wet weather while the fruit trees were in bloom. We had to feed in order to keep them from starving, and those stands which survived became very weak, but revived when the linn came into bloom and made about 50 pounds of surplus honey, on the average, to each stand. There were in this vicinity very few new swarms, and out of 14 stands, I only got four new swarms. There are a great many bees kept in this county, and they seem to pay well. Yours truly, Wm. Fairall.

It is *scrofalaria nodosa*, a large and coarse grower, and not very valuable for honey—the bloom being too scarce to pay for cultivation for bees.

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How to Winter.—Those who wish to post up on the subject of wintering, will do well to read Prof. Cook's essay as read before the National Convention of last year. It was published in the December number of 1876, and has since been re-published in pamphlet form, with the other essays. Price 15 cents.

Honey Markets.

NEW YORK.—We quote as follows:

HONEY.—The demand for strictly white honey in neat single comb caps, 12 caps in a crate, continues good, very little being in the market, and 20 to 22c. being freely paid for it. White honey in other styles ranges from 17 to 20c. Dark or Buckwheat honey, in single comb caps, 12 caps in crate, 13 to 14c.; same honey in larger caps, 10 to 12c. The supply of dark comb honey—golden-rod, buckwheat, and darker grades—is full, and prices rule low. Basswood extracted is in particularly good demand here, bringing from 13 to 14c. sharp cash, candied having the preference.

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Exports for week ending Nov. 21 .. none
" from Jan. 1. ....106,753 lbs.
" same time last year......... 66,787 "

H. K. & F. B. THURBER & Co.

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"ON NOVICE."—The readers of THE AMERICAN BEE JOURNAL will doubtless recall an article from my pen with the above heading, written some four years ago. We had hoped that it would never again become necessary for us to write another personal article; but our hopes were futile. We have recently ascertained that the bee-keepers of the country have obtained the impression from *Gleanings in Bee-Culture* that we have done Novice a gross injustice in taking money from him to partly indeminify us for damages sustained in using his goods. Now at this late day in the month we cannot write a lengthy article in time for the Dec. number; but will do so next month. In the meantime we hope our friends will suspend judgment, as we have never intentionally injured anyone, and will show most conclusively, that we and *not* Novice, are the injured party, and have just cause of complaint, if any is to be made. HERBERT A. BURCH.

South Haven, Mich., Nov. 24, 1877.

GOOD USE FOR A DIME.—We advise all our readers to forward their address and 10 cents to Orange Judd Co., 245 Broadway, New York, who make a special offer to send for this sum the number for October 1st, of the *American Agriculturist*. This splendid number, besides over 50 engravings, contains a great amount of useful, practical, reliable, seasonable information, not only for the farm and Garden, but for Household, Children included. Most will get from it hints and suggestions worth ten or twenty times its cost....... Better still, to send $1.60 and receive the paper, post-paid, from now to the end of 1878—that is, all of volume 37, with the rest of 1877 *free*.

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Established in 1861, at Washington, by the late Samuel Wagner.

"Bees work for man; and yet they never bruise
Their master's flower, but leave it, having done,
As fair as ever, and as fit for use."

"Ye light-winged laborers! still unwearied range
From flower to flower, your only love of change!
Still be your envied lot—communion rare—
To wreathe contentment round a brow of care!"

"Free as the air, yet in strict order joined,
Unnumbered bodies with a single mind!
And mingling multitudes perplex the view
Yet all in order apt, their tasks pursue."
Dr. Evans.

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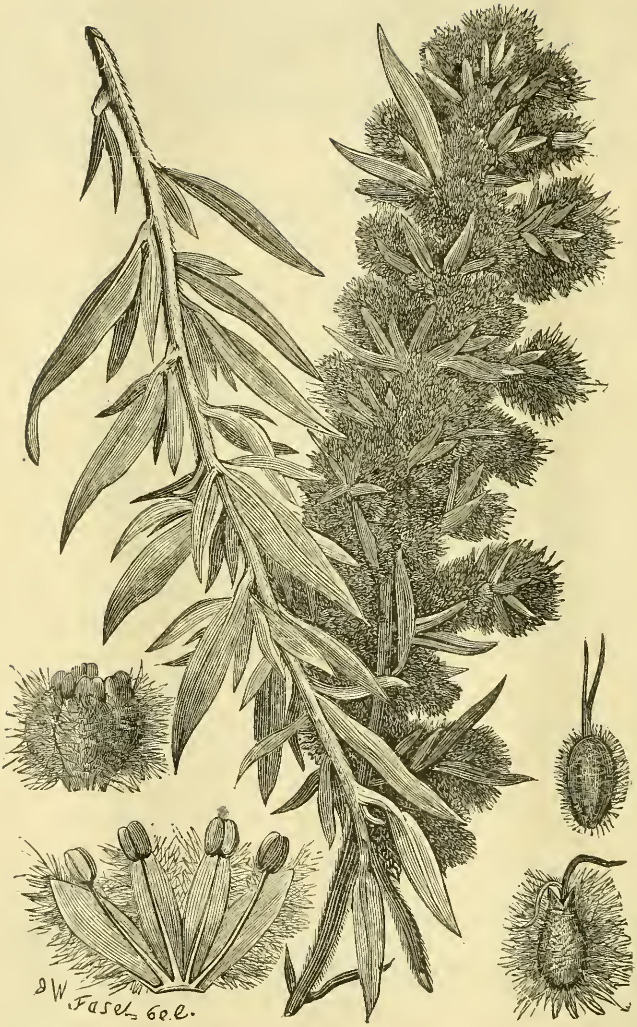
J.W. Fasel del.

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THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee-Culture.

VOL. XIV. CHICAGO, ILLINOIS, JANUARY, 1878. No. 1.

Editor's Table.

☞ Corks for honey jars should be cut across the grain, to prevent leakage.

☞ The Reports of Conventions in this issue have crowded out considerable matter that was already in type.

☞ The plant sent by Mr. Moore, of Shelbyville, Ky., is not a shrub, but an herb. It is an aster—of course good.

☞ Dr. J. P. H. Brown, is the first on hand with his Circular for 1878. It is neatly gotten up, and contains much information.

☞ It takes two years to raise teasel. It is grown by farmers to sell to cloth manufacturers. We do not think it would pay to raise for the honey alone.

☞ The time has come to prepare for next season's operations in the way of hives. It is not advisable to wait till they are needed before ordering.—Several did this last year, and as every one was in a rush just then—many were sadly disappointed. We would therefore urge all to order at once, and then time enough will be allowed to be *sure* to have them on hand when needed.

☞ As we were in doubt about the advisability of adding a Small Fruit Department, we submitted the question in our last issue. The answers are almost universal in opposition to it.—Our readers want all the energies of THE BEE JOURNAL devoted to Bees and Honey, and in this they shall not be disappointed. We shall do our "level best" to make the volume for 1878 excel all its predecessors.

☞ While at the Michigan Convention, we were entertained by friend Russell, and made the acquaintance of many Michigan apiarists. Mr. Russell has 140 colonies in the cellar, in excellent order, and a few on their winter stands. His is a combination of the movable-frame and bar-hive, and susceptible of changing size at will. For wintering out of doors, he uses heavy paper over the frames, and makes it double, by sliding the cover down over the brood chamber. One of his hives has been added to our Museum.

☞ A correspondent writes: "I see Mr. Betsinger claims to be the first inventor of a sectional hive. Barker & Dicer, of Marshall, Mich., claimed the same thing, I believe, in the AMERICAN BEE JOURNAL for March, 1874. Will Mr. Betsinger tell the readers of the JOURNAL in what year he invented his box, and I should like to hear from Barker & Dicer on the subject, also. 'Honor to whom honor is due.' I am using a section box and am interested to know who is the inventor."

☞ Friend D. D. Palmer has just returned from New York, whither he went with a car-load of comb honey, which he sold to Thurber & Co., and brought the cash, nearly $3.000 home with him. He says, honey is retailing in N. Y. at from 25 to 30 cts. per lb.—He has inspected surplus boxes of many styles on his trip, and says he had learned enough to pay him well for his time and trouble. Much of his honey was in California frames, but he wants no more to take to market that is not glassed. He spent a few pleasant hours with us, both on going and returning. A friendship of nearly a score of years made the occasion the more interesting and agreeable.

Prize Honey Boxes and Crates.

For the convenience of those who wish to have their honey in "the most marketable shape," we have had a lot of these "Prize Boxes" and "Crates" made up, and can send a crate containing 12 honey boxes ready to put on the hives, to any one who intends to make their own, and desire a correct pattern to work from. Price 75 cents, delivered at any Express office in this city.

Glass, 5x6 inches, is put on *after* the boxes are filled with honey, and before packing in the Crate. As "glass" greatly increases the express charges, we do not put it in, unless expressly ordered. Glass 10x12 cut four, and can be procured anywhere at small cost.

We can also supply these Prize Boxes, ready to nail together, for $10 per 1,000 boxes, delivered at any freight depot in the city. Crates, ready to nail together, at $10 per hundred.

Those who intend to make their honey boxes should get a Barnes saw. It is the handiest thing you can imagine. Just as we are writing this, the following letter came to hand:

"Rockton, Ill. Dec. 24, 1877.

One can do anything with a Barnes saw. Every bee-man ought to have one. I would not take $100 for mine if I could not get another. I had 20 colonies in the spring, having sold down to that number. I have received from them over a ton of honey, mostly in boxes. I am well pleased with the comb foundation, and send you a frame to show how I fasten it in.

H. W. CONKLIN."

We can supply these Saws at manufacturer's prices.

◆

PARIS EXHIBITION.—The following letter will explain itself:

DEPARTMENT OF AGRICULTURE,
WASHINGTON, Dec. 15th, 1877.

BEE-KEEPERS' ASSOCIATION: *Gentlemen.*—It will give me great pleasure to be of service to your Association in making a proper exhibit in Paris. It is my desire to have such an exhibition of our agricultural productions as will be worthy of the interest and of the country which it will represent. I shall be glad to have the assistance of those engaged in Bee Culture in making a proper exhibit of that industry.

WM. G. LEDUC, *Commissioner.*

◆

☞ An accident to one of the forms of type after it was sent to the press, broke off several letters and mixed up some others. Hereafter THE JOURNAL will be printed in our own office, and such "accidents" and "blunders" will be avoided.

Oldt's Hiving Apparatus.

FRIEND NEWMAN,—You say you have a model of Oldt's Hiving Apparatus. Will you please describe it in THE JOURNAL?—I, as well as many others, wish to know what it is like. H. K. W. FABIUS.

This apparatus consists of a pivoted case, containing two inclined planes that run downward from slots in the top of the casing, over which the hives are placed.—One of the inclined planes is pivoted, and is capable of moving upward when the bees, having moved from the hive to the queen yard, changes the centre of gravity of the casing, so that it turns on its pivots. A mica trap-door allows bees to escape from the swarming hive, but does not permit them to re-enter.

The hive containing the bees about to swarm is placed over one slot, and an empty hive over the other. At that time the casing is balanced by the full hive, leaving the entrance open from it to the queen-yard below. When the bees leave the hive they pass down into the queen-yard, as soon as the swarms leave the casing tops, and the entrance to the empty hive is opened and the other closed. As the queen-yard has projecting glass sides, the queen does not go with the swarm. On the return of the swarm, they will enter the empty hive—from the queen yard—and finding the queen there, will go to work. Of course, the bees must be allowed to work through the slots only.

Friend Oldt has gotten up a very ingenious contrivance that may work well in some cases. Whether it will *always* do so, and whether it will *pay* to have enough for a large apiary are problems that time and experience will solve.

LATER.—Friend Oldt informs us that he has dispensed with the lever,—and now the bees may return by the same inclined step that they used when departing.

◆

☞ In reply to G. C. Soden's letter, on page 420 of Dec. No., T. N. Hollett has sent us a long reply, which we have no room to publish in full, stating that the queens he sent Mr. S. were unwarranted 80c queens, and not tested! He says any one can get prompt redress, by writing him personally, if not satisfied with his dealings. The particulars of a personal controversy are uninteresting to our readers, and in future we shall not publish *complaints.* When we have positive *proof of unfair dealing*, we shall, of course, state the fact, but we know our readers have no relish for personal controversies.

☞ W. M. Kellogg wishes to know the names of the best botanical works for beginners. Gray's Lessons in Botany for analyzing, and Gray's School and Field Book, are the best.

☞ By request of many, we have gotten up a "Constitution and By-laws," suitable for local Associations, which we can supply with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 is ordered, they will have a blank left for writing in the name of the association, etc. A sample copy will be sent for a 3c. postage stamp.

☞ Our Stock of Vol. 1, AMERICAN BEE JOURNL is now exhausted ; so we take it from our list of Books for Sale. "The Dzierzon Theory" which we have re-published in pamphlet form, now takes its place. It contains much that every bee-keeper ought to know, and is one of the most interesting and instructive little works ever published. Its low price (only 20 cents, postpaid,) places it within the reach of all.

HOGE'S CARRIER.—Here is a case where comb honey was carried on ox-wagons, steamboats and railroads, a distance of 2,250 miles, without breakage. This is a fact worth recording, we therefore give the proof :

DEADWOOD CITY, Dec. 17, 1877.

Messrs. H. K. & F. B. THURBER & CO., N. Y. City :

Dear Sirs :—Agreeable to promise we report: The ten cases comb honey purchased of you, packed in your patent *rubber-ball* cases, shipped from New York, Oct. 6th, '77. reached Deadwood, Dec. 6th, '77, having been in transit just 60 days, traversing about 1,000 miles via railroad, 1,000 miles via lake steamer, 250 miles in dead-axle ox-wagons (24 days); 2,250 miles. When opened, *not a single comb was found to be broken.* You can *frame* this if you choose. The cases can not be subjected to a more thorough test than these were. Yours truly,

[Signed,] MILLER & MCPHERSON.

SEND BY MAIL.—We have just received a package costing us 45 cts. for expressage. It weighed only 8 oz., and if sent by mail would have come just as safely for 8 cents. This is only one of the many; and we shall thank our friends to make a note of the following: Seeds or samples of any kind of merchandise can be mailed for 1 cent per ounce. Printed matter for 1 cent for each *two* ounces. *Don't send us any small packages by express.*

☞ Subscribers will please notice the date upon their subscription labels and see that they are "up with the times."

REMOVAL.—In order to get more room for our constantly-increasing museum of implements for the apiary, we have removed our office to No. 974 West Madison St., where we have two floors 20x60 feet each. The Madison street cars (going west) pass our door, making it very convenient for those visiting the city to call on us.

☞ It is suggested that we get up a Petition to Congress to have the Postal Law amended to admit of Queens being sent in the Mails, as heretofore. We will in a few days get up Blank Petitions ready for signatures, which any one can have on application at this office, who will get them signed and returned to us by March 1st. We will then see that they are properly presented to Congress, and by a united effort try to have our voice heard. We ought to have 100,000 signatures, in 30 days. Who will take hold of the matter?

☞ In answer to H. L. Lankton's letter on page 422, Dec. No., H. Allen says there are two sides to such controverses ; that he felt *insulted*, and hence wrote sharply, but will send the two queens due Mr. L. in the spring. A little of the *oil* of kind words, (on both sides, perhaps), will be productive of peace and harmony. We decline to publish, in future, details of all person, al controversies. They are neither pleasant nor profitable reading.

☞ Many complain of the dearth of small currency, all over the country. In reply to correspondents, we will say that *Postage Stamps*, of any denomination, can always be obtained at every country post-office; and when currency cannot be had, we shall receive such stamps for anything desired from this office. 1, 2 *and* 3 *cent stamps preferred.*

☞ Paper made expressly for the covers of THE BEE JOURNAL did not arrive from the mill in time for this issue. Hereafter it will have a nicer cover and be of uniform color.

☞ When you have a leisure hour or evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

Marketing Honey.

This department will be devoted to items of interest concerning Packing, Selling and Shipping Honey and Beeswax.

How to Prevent the Adulteration of Honey.—We believe the successful solution of this problem, to a very considerable extent, lies in the hands of the producers. If we all join in an earnest effort, it will only be a question of a season or two when an end will be put to this nefarious business. We want through our local papers and personal intercourse to school dealers and consumers in selling and buying *candid* honey. Ring all the charges of purity, flavor and price.—Packing comb honey into glass jars opens the door for adulteration; now, we want to stop this, and we can effectually,—but we fancy that we hear some dealers sing that same old song that "broken, comb honey must be saved, and this is the only way to do it." Producers will stop sending broken combs, stop shipping piece boxes, extract the honey from all such, and market only those frames, or caps that are well secured all around. Such honey can be transported all right.—Harbison never has any claims against him for broken honey, and he collects his crop from all over San Deigo county, California, sends it to San Francisco where he breaks bulk, and re-ships to New York. It is said his combs are seldom broken. He attributes his success to the fact that he never crates frames in which the combs are not well-secured all around, and cells capped. If producers would all do that, their honey would reach consumers nice and dry, and dealers would hear no excuse for cutting up the combs and packing them in jars.

Strained honey sells for 40 and 45 cents per gallon in San Domingo and Havana.

The amount of sugar annually consumed in Great Britain is 900,000 tons, being about 60 lbs. for every one of the population. Raw sugar, when imported, contains from 2 to 3 per cent. of impurities. Three tons of stones have been found in a single cargo. A case was lately before the Circuit Court of Glasgow, which showed that arsenic was mixed with sugar. A captain was charged with causing the death of several seamen by serving out putrid pork to them, but, on the sugar being analyzed, it was found to contain sufficient arsenic to cause death. This sugar was supplied to the ship at Collao. And still people prefer sugar, and sugar syrup to honey.

Candied Honey.—The question is so frequently asked, how to prevent honey from candying, and with such seeming desire to possess the secret, that we have determined to gratify the curious, and tell them all about it; but we wish to preface our information with the assurance that we discountenance, as disreputable, the adulteration of honey in any shape or manner. The candying of honey is caused by the over-saturation of sugar; by this expression, we mean too little water, and too much sugar. All the scientific research and learned discussions on this subject that has ever come under our observation have failed to develop a more simple or rational reason than this, and the same can be said regarding the remedy. You first reduce the body to a thin limpid state by adding sufficient water. It is only necessary to warm the honey to thoroughly incorporate it with the water; it need not be boiled. This makes the body so thin that it is necessarily impossible for it to candy.

Buyers object to it in this watered state, and in order to retain its body without renewing its liability to congeal,—some have been adding a sufficient quantity of that non-crystalizable substance, known as glucose. Honey thus "processed" will not thicken, but it is certainly *not* pure. It is claimed, and we have no doubt it is true, that by the aid of this "processing," thousands of pounds of comb honey, nice in itself, but stored in such awkward and unsightly surplus receptacles, furnished by lazy and improvident beekeepers, has been sold, that would otherwise have proved a drug. This is an excuse—though only a poor one, for such "doctoring" process.

Capt. Hetherington has three grades of honey. "C" indicates his perfectly filled white combs of clover or linden.—The "B" is his buckwheat, while boxes that are stored with more than one kind of honey are indicated by an "X." Thus far, he has shipped 36,800 lbs. of "B;" 10,500 lbs. of "X;" and 7,250 lbs. of "C;"—2,271 cases in all!

Any questions that may be asked regarding the packing, selling and shipping of honey will be answered in this department.

Chas. Parlange, Esq., of Pointe Coupee, La., who works his apiary entirely for extracted honey, has shipped Thurber & Co. more than 100 bbls. this season. The bbls are wooden bound, and hold about 50 gallons each. Mr. P. is one of the leading lawyers of his state.

Our Letter Box.

Hamilton, Ill., Dec. 10, 1877.

"We will add our testimony to that of others in favor of granulated, extracted honey. We raised 7,000 lbs. of it, and it is nearly all sold at 10@12c. per lb."

Ch. Dadant & Co.

Lexington, Ky., Dec. 11, 1877.

"The Journal surpasses itself; each issue is an improvement over the last, in the bright, cheerful appearance and instructive influence of its whole composition. Long may it live!" W. Williamson.

Grand Rapids, Oct. 29, 1877.

"My bees came through last winter in a fine condition, not losing one, and they have netted me about $20, in bees and honey, to each hive this season, and supplied themselves with sufficient food for winter."

G. W. Dickinson.

Fulton Co., Ill., Nov. 22, 1877.

"I have just built a bee house 52 ft. long, 7 ft. wide and 8 ft. high. I have stored 50 hives, (double tier), and hope they will winter well. I have 50 colonies out of doors; top of caps filled with chaff, and shall thus try both ways." H. Haines.

Holt, Mich., Dec. 10, 1877.

"The past season was a poor one here.—Each hive had about 1 super filled. Early honey was very white. They weigh from 40 to 45 lbs. each. The fall crop was nearly a failure. We had 40 hives; increased to over 100. I have sold my honey.

Jno. L. Davis.

Rochelle, Ill., Dec. 16, 1877.

"I have 31 colonies in good condition; 25 of them in the cellar and the others packed in straw. Those in the cellar are all right now. I use the Langstroth hive, and left the caps on the hives, but nothing on the frames. I have had no experience in wintering in cellars, having always left them on their summer stands. C. S. Hubbard.

Milledgeville, Ill., Nov. 26, 1877.

"The American Bee Journal for Nov. was received in due season, and read with usual interest. The New York Convention was a grand success, and the discussions were of great moment. There is as much in selling as in producing, in our business, in a financial point of view."

F. A. Snell.

Platteville, Wis., Dec. 7, 1877.

"I have 100 colonies, and cannot get along without The Bee Journal. I had 50 last spring, and got 400 lbs. comb honey in boxes, and 7,000 lbs. of extracted, besides doubling my colonies, which are strong and in good condition for winter. I built a bee-house, but it is not ready for bees this winter. I have had good success in wintering on summer stands. I use frames 13x21. I have some 15x18, but do not like them as well. I have from 9 to 11 frames in a hive in the summer, and about 8 in the winter. The space between the frames and the end of the hives are filled with chaff and straw; also the cover." E. France.

Bloomington, Ill., Dec. 5. 1877.

"I have just finished reading the Nov. number or The American Bee Journal. Am much pleased with contents, especially the essay on the management of the apiary. I think that one article alone worth the price of subscription for a year. I have in winter quarters 64 colonies on their summer stands, and believe in quilts, partitions, Italians and the slinger."

Will. H. Wolcott.

DeKalb Junction, N. Y.

"In this locality, this has been a very poor season for honey. The grasshopper and drouth killed every thing in the line of bloom, as well as all kinds of fodder.—Have gone into winter quarters with 94 colonies; some in rather poor condition.—They are 22 miles from my residence, and I think some may die before spring. I have wintered 165 colonies in my home apiary without losing one." Ira Barber.

Gardiner, Me., Dec. 10, 1877.

"In this part of the state we have had one of the poorest seasons ever known for honey. My bees began to swarm about a month earlier than usual, but the drouth in June stopped all swarming and storing of honey in the boxes. Black bees have done nothing. Bees are generally in very poor condition for winter, and the losses will be heavy. Dec. 1st, I put into winter quarters 61 colonies with sufficient stores to carry them through, but not as strong in bees as usual." O. L. Sawyer.

Des Moines, Iowa, Nov. 30, 1877.

"On Thanksgiving day I prepared my bees for winter—placing them closely in rows, the better to enable me to watch them and see that their entrances are free from snow, ice, etc. Tight board fence on the north and straw over and around them affords them all the necessary shelter. I use Finn's Double-Walled Porous Bee Hives. For 20 years in Mass. I have wintered in cellars, generally losing half of them. I now go into winter quarters with 22 in Langstroth frames, but double-walled hives—they are light in bees and honey. I expect to winter every colony and bring them out in March healthy, with combs dry and brood plenty. I expect to go more largely into the business next year, and will report how I prosper." W. Clement.

Oneida, Ill., Dec. 8, 1877.

"Last spring I went to Benton Bay, Miss., to take charge of an apiary there; taking my own bees there also, I began with 6 light stocks and 3 nuclei; increased to 20 good strong stocks. Had 1 swarm and 1 queen given me by friend McGaw. Got 647 lbs. of honey, 332 lbs. of comb, and 315 lbs. of extracted. My folks at home have 2 swarms, so we are back to our old number 22, that we had a year ago, losing 13 last winter by the bees indulging too freely in cider. My employer, Levi Hollingsworth, began with 108 stocks, increased to 172, and got 6,100 lbs. of box, and 911 lbs. of extracted honey; most of which was shipped to Columbus, O. The fore part of the season was backward, cold and rainy; and the most of the surplus got was from fall forage. I expect to go down there again next year, as I like it there first rate."

Will M. Kellogg.

Owen Co., Ky., Dec. 11, 1877.

"I have received the Bee Journal regularly for the past 3 or 4 years, not a number missing. I prize it very highly, and if it should fail to come at the proper time, I should feel as though a dear friend was absent. I have been taking papers since 1840, but never have patronized one conducted in a more commendable way than The American Bee Journal. I commenced the season with 16 colonies, increased by natural swarming to 41, and got about 100 lbs. of comb honey. They now look well. I would be glad of many things I see advertised in The Journal, but the Express companies have so little mercy, in charges, that I am compelled to do without them." G. W. Jenkins.

Fabius, N. Y., Dec. 10, 1877.

"I notice on page 365 that teasel is mentioned as producing the whitest, and nicest honey. I have had experience with all kinds of honey-producing bloom, (the teasel included), and find nothing quite equal to basswood honey for flavor or whiteness.—For 2 years past no teasel has been raised in this vicinity, but our honey has been nice and white. When teasel was raised here, some honey was dark; caused by the small teasel blossoms drying and becoming colored by the rain. Teasel produces a large crop of honey of good quality, but I think not quite equal to basswood."

H. D. Mason.

[The past season was dry, and perhaps that accounts for the teasel honey being so good. There being but little rain, the small blossoms did not become colored and stain it. *In other* years this might have been otherwise, and both contradictory experiences may be perfectly correct and harmonious.—Whatever may have been the result in other years, in the past season it certainly gave a large yield of good honey.—Ed.]

Maysville, Ky., Dec. 9, 1877.

"I commenced the spring with 3 colonies, in Langstroth hives; all are in fair condition. I commenced feeding, March 10; increased, by artificial swarming, to 10 colonies. One swarmed and went to the woods, led by an imported queen. I sold one colony; from the remaining 9 I took 500 lbs. of honey—all extracted, except about 50 lbs. of comb. The season was the best that we have had for years. My 9 hives are packed in straw on their summer stands, under a shed 8 ft. wide, and 32 ft. long.—When extracting, the washings of the articles used about the Extractor was put in a stone jar, and set out in the sun to ferment, to be poured into the vinegar barrel. I neglected to cover it up, and flies got into it, and it was ruined. In a day or two, I noticed that it was covered with millers. I skimmed them out, and at night set the jar with the same water near the bee hives.—I examined it next morning, and skimmed out 52 millers. I removed it during the day, and set out again at night, and caught 31. The following night, I caught 5. I frequently placed the jar near the hives, during the summer, at intervals, but never succeeded in catching more than 4 or 5 at a time." Wm. W. Lynch.

Keokuk Co., Iowa, Dec. 15, 1877.

"My bees did well this season. We had nearly 2,000 lbs. of honey from them. They are in winter quarters, in better condition than usual." Selmira L. Vail.

Opelousas, La., Nov. 30, 1877.

"What is the best way to handle queens when cutting their wings? I am fearful of injuring them, when holding them with the fingers. I have an idea that a drop or two of honey from a small oil can would so retard a queen that her wings could be cut without touching the body."

J. W. Jackson.

[The queen should be handled by the wings or upper portion of the body—never by the abdomen. The queen may be retarded as you suggest.—Ed.]

Davis, Mich., Dec. 11, 1877.

"A wax comb guide may be no new thing. I have read The American Bee Journal for 2 years, during which time much has been said in regard to frame guides. The wax guide can be made by placing a straight edge on the top bar, wetting the straight edge lightly with a sponge, so that the wax will not stick to it; keep the bar dry. Hold it on an incline, so that the wax may be poured on with a spoon.—You can tip it, so that it will run fast or slow, making a light or heavy guide, as desired. With a little practice, this can be done rapidly. I use this guide; the bees accept it readily. I can put in the wax guide in one-half of the time required for the wooden guide, and it is much better.—I prefer it to comb foundation as a guide only." Wm. P. Everitt.

Noble Co., Ind., Dec. 10, 1877.

"In the spring, I had 60 colonies out of 75 put up in the fall. I increased to 107; got no surplus; I worked against increase all I could, and tried for box-honey, but got none. Cause, poor season,—the worst in 25 years. Fed in May. Bees gathered honey briskly in June. In July and August they consumed what they gathered in June; but increased their stores sometime in September. I have some 45 stands with about 25 lbs. of honey; the rest very light. I sold some, and took 26 stands of bees to feed others with. I got only 50 lbs. of honey from them. I have 20 colonies that I think will starve before spring. Such is the condition of most of bees in this county. I anticipate great loss of bees by starvation this winter. I had 3 swarms of black bees, with some trace of Italian blood among them, to come and settle in my bee yard. One had a beautiful yellow queen with them. I hived them; they went to work July 31st. Young bees hatched in due time, all pure Italian. Query: Are those bees pure Italians when their queen came with black and hybrid bees? Why did this swarm come and cluster in my bee yard? Please answer. Are there black bees in Italy?" F. R. Davis.

[If the queen was pure and purely mated, her progeny is pure, no matter in what company she may be. Most likely, she had been recently introduced to the colony, and led off the swarm. Not finding any better place to cluster, they favored you with a call. There are black bees in Italy.—Ed.]

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

For the American Bee Journal.

A Great National Industry.

Agriculture in its various branches, mining, and manufacturing, are the great industries which lie at the foundation of individual and national wealth. They are the great producing factors. Upon them all other pursuits depend. To add to these another productive calling, which can be followed by any who desire, in all parts of our country, will be to add to the general wealth, and to give a means of competence and happiness to our people. The modern improvements in bee-keeping—including the movable-comb hive, the honey extractor, comb-foundation, and the safe methods of wintering—make it a pursuit which may be indefinitely developed. Indeed, it may be so followed, that, from its wide diffusion over our country, and from the value of its products, it may be truly called a great national industry.

1. The products of some kind of labor, for instance some branches of fruit-growing, are so perishable that they must be sold as soon as ready for market, and as they will bear transportation but a short distance, the producer is put to a great disadvantage. The products of bee-keeping, honey and wax, may be kept an indefinite time, and may be transported to all parts of the world.

2. The demand for honey and wax may be increased beyond all of our present conceptions. Since the great success of comb-foundation, there is no doubt but all the wax produced will find a ready sale at advanced prices. Honey, at present, can scarcely be called an article of diet. It is a luxury met with now and then; but in the larger number of families, hotels, and restaurants is never seen. When its excellence and cheapness as an article of diet becomes known, it will be more widely used, and all that can be produced will be readily consumed.

3. Bee-keeping can be followed in all parts of our domain, north, south, east and west. In nearly all localities bees will do well. There is scarcely any locality in which they will not more than pay their way. In the country and in villages, there is little probability of over-stocking for years to come. In case a locality becomes over-stocked, some keepers must remove to unoccupied territory. In cities, a few hives can be profitably kept, as is shown by the good success of Mr. Muth, of Cincinnati.

4. Any intelligent person, who will give attention to it, can learn the business of bee-keeping. The theory of it is plainly taught in books and the BEE JOURNAL. The practice can be acquired by any intelligent person who will get a hive of bees and go to work to apply the theory he has learned by careful reading.

5. The business can be begun with small capital, and on a very small scale. Any industrious person can get one, or a few swarms of bees in box-hives. He can transfer them to movable-comb hives. Then as he acquires knowledge and skill in the work, his bees will increase. He can make his income from his bees more than pay all the outgo, and soon have a stock as large as he desires, as the product of the one or few with which he begun.

6. If he desires, he can increase his business to any extent. His own hives will give him the bees. He can establish apiaries at as many points as he chooses. He can superintend these apiaries, and attend to purchases and sales. Followed in this way, bee-keeping may become a business demanding the best efforts of the ablest business men. The report is just at hand that Capt. Hetherington, of Cherry Valley, N. Y. has 3,000 colonies, and that his income from them the present year will be about $30.000. This is only an instance of what may be done by many others.

7. No business can succeed in the long run which does not give a fair profit.—Without going wild over the reports of the immense profits realized in a few instances from keeping bees, there seems no doubt that when taken up as a regular business, and intelligently pursued from year to year, it will pay a profit as large as most other callings. Possibly, for a few years, men already in the business, and following it with energy, may make a larger profit than most other callings give. But this will not continue long. Labor and capital will flow in this direction until profits are equalized.

A calling that produces valuable staple articles, that may be followed in all sections of the country, of which intelligent people can readily acquire the theory and the practice, that may be undertaken on a small scale and with a very small outlay, that may be developed to such dimensions, as to give scope to the powers of the ablest business men, and that yields a fair profit on the investment,—such a pursuit surely has in it such elements as may enable it to grow into an industry that may truly be called national.

But it is said by some that there are such great risks to be run in bee-keeping, that the business partakes of the nature of a lottery, and that no such business can become of national importance. These objectors will enumerate the moth, foul-brood, poor seasons, dangers of wintering, and over-stocking the market, as good reasons why the business of keeping bees can have no large development.

1. As to the moth, the bee-keepers, who have had the widest experience, say, that it gives no trouble when Italians are kept in hives that have no lurking places for the enemy. Upon this point the testimony is, in effect, unanimous.

2. Foul-brood has been in some places a serious difficulty. But care can, in most cases, keep it out, or eradicate it when it appears. Some of the best bee-keepers, who have had to contend with the disease, tell us that salicylic acid, used according to their direction, is a sure cure.

3. Poor seasons are an injury, but poor seasons come to nearly every business,—to bee-keeping no more than to others. In calculating the profits of bee-keeping, we must make allowance for poor seasons. After making this allowance, the experience of the best established keepers shows a good profit.

4. The dangers of wintering seem about to disappear. Perhaps it is not too much to say that they have disappeared. Those

that have been sure in the fall of young bees and healthy stores, and who have given them suitable protection, either in doors or out, report success. They tell us, they have no fear of wintering. Young bees, healthy stores, and proper protection can be secured by the intelligent bee-keeper. He can be sure of them. They are entirely under his control. Hence, it does not seem rash to say that the dangers of wintering are, for the intelligent, energetic bee-keeper, among the things that were.

5. Lastly, we have the objection that the markets will be overstocked, and hence prices will fall below a paying basis. This objection has been so earnestly urged that it is worth while to look at it somewhat closely, which I propose to do in a subsequent essay. I will only say here, that the history of nearly every business shows that as the supply of an article increases, and the prices fall, the demand increases so largely as to make the aggregate profits greater than they were when the production was less, and the prices higher. So in regard to honey; if the prices fall a good deal below what they now are, this reduced price will cause honey to be taken by large numbers, who now do not use it at all; and this consumption will so increase the demand, that the producer can sell 50 ℔s where he now sells 1℔; and so make much larger profits, in the aggregate, in spite of the lower prices.

The arguments in favor of bee-keeping becoming a great industry of national importance seem to me to be clear and strong. The objections do not seem to be well taken. I think there is no doubt but capital and intelligent labor will be attracted to this business, and that in the course of a quarter of a century it will have a growth that will surprise us all.

Keokuk, Iowa, Dec. 5, 1877. O. CLUTE.

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For the American Bee Journal.

Grape Sugar.

A great deal of attention has, of late, been directed to the use of grape sugar as a cheap substitute for honey for wintering bees.—As the solid crystaline portion of honey is pure grape sugar, there is no reason why a pure article of grape sugar should not be a perfect substitute for it. Perhaps there are some who would like to experiment with it, and as it may be more convenient for them to manufacture it themselves, than to buy, I will describe a process for manufacturing it on a small scale

Grape sugar is most economically prepared by artificially modifying starch.—This can be done in two ways, which I will describe:

To 10 parts starch, (or bolted white corn meal) add 1 part bruised malt and 40 parts of water, all by weight. Heat the malt and water to about 150° fahr., and then add the starch, stir constantly and raise the temperture to about 170° fahr., and keep at this degree until the starch is all converted, and when all complete, bail, filter, and reduce to a syrup. This is glucose or impure grape sugar. It contains a great deal of mucilage and is very much inclined to sour.

The best process, although a little more troublesome, is as follows:

25 parts of starch will require about 100 parts of water, and 1 part of oil of vitrol.—The acid should be diluted by adding it slowly to about 10 times as much water, in an earthen vessel.

Put the water into a copper kettle, on a wooden tank, heated by a copper steam coil, (don't use any other metals, excepting lead,) bring it to a boil, then add the diluted oil of vitrol, and while the liquid is kept boiling, gradually add the starch, which should be mixed with water enough to make it of a creamy consistency. Avoid lumps, and be very careful and *do not let it burn* during the process of boiling, as that will render it *poisonous to the bees.* Replace the water as it evaporates. The starch is first converted into *dextrine.* It will require from 6 to 8 hours continuous boiling to thoroughly convert it into grape sugar. The acid does not unite with the starch, but only acts by its presence. When the convertion is complete, the acid must be thoroughly removed by the addition of pure carbonate of lime.—A good article of powdered chalk will do.—Add it in small quantities until the liquid ceases to effervesce upon the addition of more chalk. Stir the liquid while adding the chalk. It will require a little more chalk than the oil of vitrol used.

After neutralization, the liquor should be strained into a tub, to allow the gypsum, or sulphate of lime, to settle; which will require about 24 hours. Keep the vessel closely covered, and use every precaution to prevent souring. The clear liquor should be drawn off and evaporated to the consistency of syrup, again allowed to settle, and then reduced further if you wish it to crystalize.

The above process will do very well for bee food, but it will be too dark and impure for a commercial article, and requires to be filtered through animal charcoal to whiten it.

Now let every body try their skill, and let us hear the result. If grape sugar is a reliable substitute for honey, and only costs 2 or 3 cents a pound, we can extract every drop of honey from the comb and winter on grape sugar. S. C. DODGE.

Chattanooga, Tenn., Oct. 25, 2877.

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Mr. S. Scott Hammitt, College Hill, Ohio, inquires:

1. Do you have Clover and Linden with you?

Yes, in abundance. We also have a great quantity of Poplar, by some, called Tulip. From this we get our first crop of honey.—Its yield some years is very large, and in flavor, we think, far supasses any other kind of honey. In color, it is classed as dark.

2. Are there many bees kept in and around your vicinity?

At a guess, I would say, that there are about 1,000 colonies in Maury Co.

3. Would it pay to embark in the business there?

To make it an exclusive business, I hardly think it would.

4. What do Italian bees sell at per colony?

From 5 to 10 dollars.

5. What is good land worth in a small way?

From 25 to 100 dollars per acre.

6. Do you know anything about Florida? I do not.

7. Can you inform me of any locality that I could go to where pasturage is good?

You will find bee pastureage good in nearly all pastures of middle and east Tennessee. You will probably find lands cheaper in east Tennessee. We have quite a number of inquiries concerning that portion of our state, but we are not sufficiently acquainted with it to give the desired information. We refer all making inquiries about that section of our state, to our friend S. C. Dodge, Chattanooga, Tenn.. whom we know will cheerfully respond to any letters addressed to him. W. J. A.

FRIEND ANDREWS, we have been confined to our room and bed for one year, and after suffering the pains and aches subject to this life, we had finally to submit to the amputation of our right limb; but we are happy to say that we are again up, and feel as buoyant as a boy, and hope hereafter to occasionally send some items for the JOURNAL. A. F. MOON.

We are right glad to hear from friend Moon again, but sorry to learn of his suffering and misfortune in the loss of one of his limbs. We are well prepared to fully sympathise with one in his condition, for we have not been able to raise our right arm since 1868. W. J. A.

☞ Dr. G. D. Lawrence, Cedar Bluff, Ala., writes that he started in the spring with 13 colonies (4 weak and 2 queenless). He increased to 30 and got 40 to 60 lbs. honey. He intends to increase to 100 next season.

W. H. Green, Sparta, Ga., writes: Bees have done well. Extracted 1,000 lbs. of honey from 5 colonies.

Dr. Larch, Ashland, Mo., writes: Have 14,000 lbs. of choice honey, averaging 110 lbs. to the hive. Season only a poor one.

A. F. Moon, Rome, Ga.: Bees done well; wintering on summer stands, with not even a honey board on them. Since Dec. 6, bees have been carrying in pollen freely. Some colonies have brood, and all are dry, sweet and lively.

In *Annals of Bee Culture*, Mrs. Tupper stated that she succeeded, in 1870, with 27 queens, more than nine-tenths ot the time she attempted it. She further stated that during that season she did not fail in a single instance when she tried. If these are facts, is there not enough of genius among our bee keepers to make this a success? We have hundreds of bee keepers that are as well qualified, who understand all branches of bee culture, as well as Mrs. T. Then let their light shine. A. F. MOON.

We never like to assert that a thing can't be done; but as to fertilizing queens in confinement, we do emphatically say we don't believe it, nor never will believe it until we have a practical demonstration of the fact—any essays to the contrary notwithstanding. W. J. A.

Twenty-Five Dollars Premium.

I will give $25 in cash for a successful method of fertilizing queens in confinement, the test to be made by three practical and disinterested bee-keepers. I want no essays about the matter, but facts demonstrated by experiments. A. F. MOON.

☞ In a note dated Nov. 22, Miss Anna Saunders writes us of the death of her favorite niece.

We extend our warmest and most heartfelt sympathies in this, her sore bereavement. W. J. A.

☞ I had 4 queens hatched in Oct. They were small but well bred; the weather continued cold and wet for over 21 days, so that no swarms flew. These queens, strange to say, were fertilized on the 23rd day after being hatched. A. F. MOON.

North Eastern Bee-Keepers' Ass'n.

The North-Eastern Bee-Keepers' Association will hold its Annual Meeting at the City Hall, Syracuse, N. Y., on the 6th, 7th and 8th of February, 1878. First session at 1 o'clock, P. M., of the 6th.

Papers on important subjects are expected from some of our own members, as well as from eminent apiarists abroad. Among those may be mentioned an essay on "Recently Discovered Parasites of the Honey Bee, and their Connection with Successful Wintering."

The Marketing of Honey will receive special attention, and it is expected that initiatory steps will be taken toward supplying each member of the Association with reliable data of much importance to honey producers. To secure satisfactory results, a full attendance of this class is especially desired. P. H. ELWOOD, Pres't.

J. H. NELLIS, Sec'y.

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BEE POISONS IN MEDICINE.—Diptheria, which in North America, England, and the coast lands, has for years been epidemic, is also becoming common among us, and during this damp, cold winter, particularly, it has manifested its malignancy. The symptoms of this disease may be known to our readers. but it is not as probable that the fact is known that *apis* (bee poison), has been used with excellent results in cases of this malady. This remedy is also successfully employed in cases of scarlet fever; in dropsy, particularly, which often appears after scarlet fever; in eruptions of various kinds; diseases of the eyes; dizziness; palpitation, and other complaints.—Just here, I cannot refrain from mentioning the view of a homœpathest, who recomends as a preventive of croup, scarlet fever, and eruptions common among children, the use of comb-honey. The combs, which, in their removal from the hives, have the bees brushed from them, (not smoked off), become in a certain measure infected with the bee poison; for the sudden pressure causes the stings of the bees to be thrust out involentarily, and the poison moistens the combs, upon which fact he bases his view.—*Schlesische Imker, Troppan, Lower Silesia.*

Correspondence.

The Secret of Successful Bee-keeping.

To be successful, the apiarist must have a simple, movable, frame hive of some kind; and for box honey, the brood chamber should not contain over 1550 cubic inches inside the frames. All know that bees gather honey, and that the eggs laid by the queen produce bees, consequently the more eggs the queen lays, the more bees we get; and the more bees we have, the more honey they gather. In fact, the queen is the producer of the honey. Therefore, if we wish good returns from our bees, we must see to it that we have good prolific queens, and that they fill the combs with brood before the honey season commences, so that when the honey harvest comes, the bees will be obliged to place the honey in the boxes, as there will be nowhere else for them to store it.

But how shall we secure combs full of brood, and plenty of bees to carry on the labors of the hive by the time our honey harvest begins? As soon as spring opens, our bees should all be examined by lifting the frames of each hive, and if the stocks are weak, the bees are shut to one side of the hive by means of a division board, so as to keep up the necessary heat for brood-rearing, on as many combs as they can cover. As soon as the queen has filled these combs with eggs, we spread them apart, inserting an empty comb between those occupied with brood, and in a few days' time the queen will fill this one also; and so we keep on until every available cell is occupied with brood. Thus it will be seen that instead of the queen laying her eggs on the outside of the cluster, she lays them in the center of the brood-nest, where they should be. After the hive is full of brood and bees, it does not make so much difference, as the weather is warm, and bees are plenty, so that the queen can deposit her eggs anywhere in the hive.

As soon as the strongest stocks are full, take a frame of brood just gnawing out and place it in the weaker ones, giving the strong one an empty comb for the queen to fill again, and so keep on until all are full.—When this is accomplished, put on boxes; and, as we said at the commencement, if any honey is gathered it must be put in the boxes. Each box should have a small piece of comb attached to the top as a "starter," to get the bees to work more readily in the boxes; the center tier of boxes, if possible, should be full of comb, left over from the previous year. As soon as the first few boxes are filled, they should be taken off, before being colored by the bees passing over them, and empty ones put in their places, thereby causing the bees to work with renewed vigor to fill up the vacant space left where the full ones were taken out. And thus we keep taking out full ones, and putting empty ones in their places as long as the honey season lasts.

This, in short, is the way we work our bees to secure the yields of honey which trouble Jno. Fox so much. Please say to your Otisco Valley correspondent that we fear he has not observed closely about teasel honey. We were told when we first commenced to keep bees, that teasel honey was dark, but after 9 years of experience we will say we never saw any dark honey gathered from teasel. We have caught bees while they were at work on the blossom and killed them, only to find their honey sacs filled with white honey; and we have extracted when basswood was a failure, with plenty of teasel honey, only to find it white. In short, we never got a pound of dark honey from our bees, when teasel was in bloom. It is the whitest honey we know anything about. G. M. DOOLITTLE.

Borodino, N. Y., Dec. 11, 1877.

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Comb Foundation for Starters.

FRIEND NEWMAN:—I could not do without THE JOURNAL, in the management of my bees, and I cannot see how any one else can, and keep up with the times.

I see there still exists a great difference of opinion with regard to comb foundation, as to the advantage of using it in boxes, etc. I tried some yellow foundation this season, and had good success with it. I tried it in boxes, and also in the brood chamber, and had no trouble with ragged or thick comb. They worked it out, I think, as thin as any natural comb.

I do not think a frame or a box ought to be filled full of the foundation, especially thick foundation, for they will have too much wax to work up and remove. Consequently, when honey is coming in rapidly, they will commence putting it in the cells before they have thinned it out as it should be. This, I think is one reason of so much thick comb, or rib in the honey boxes.—Now I put narrow strips of foundation in my boxes, reaching to the bottom of the box, serving them as a ladder to the top of the box, and also as starters for the bees.—In the brood-chamber I put 3 or 4 small starters of the foundation in each frame the shape of a triangle, and about 3 in. long. Starters put in this way, the bees build out and I think if you will give this method a trial, you will find they will build it out as thin as natural comb; I think foundation used in this way is of great value in getting straight combs in the brood chamber, and also for starting bees in the boxes, and producing large quantities of box honey.

I have just read an article in the last issue, from James Heddon, in which I fully concur with him. I believe, as he says, we ought not to induce every one that has tried some other pursuit and failed, to try bee-keeping. Especially those that are hunting *easy labor* and *large profits*, for they will *be sure* to fail.

I believe we ought to look to the sale of our honey as one of the most important items in bee-keeping. How often do we see persons that have been induced to try bee-keeping, when they find that there is a great deal of labor and attention attached to it, take no interest in it; take their honey, as Mr. Hedden says, in tubs and pails, all mashed and broken up, going around to the grocery, and take just what is offered for it; often as low as 6, 8, or 10 cts. per lb. for comb honey. Now, this is to some extent injurious to the sale of our own honey, and I for one, am for building up, not for pulling down our own interests.

My father and myself commenced with 60 hives this season, and 20 of them were very weak; the remaining 40 were in tolerable good condition. These we run for extracted honey, averaging 150 ℔s. per hive; making in all about 6,000 ℔s. Our honey was a little dark, but of good quality. We sold most of it at retail, getting 15 cts. per ℔. We increased our bees to 80 colonies, and they have plenty of honey, and so far in good condition for winter. I will close by wishing you a "a happy and prosperous new year." **Wm. Bence.**

Newbery, Jefferson Co., Ky.

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For the American Bee Journal.

New Races of Bees.

Some years ago an article appeared either in The American Bee Journal or in one of our agricultural papers, giving an account of a bee on the Amoor river, that was thought would prove of value in this country. Has anything further been heard of it?

Correspondence has been opened by several American bee-keepers, to obtain information about *Apis dorsata*, of Java, and I hope soon to have something to communicate respecting it.

I received a letter to-day from a gentleman who is skillful in handling bees. He thinks of going to Europe in the spring, to import the Cyprian bee for himself and to fill several orders from friends; and I know of several who have ordered them from German breeders. So there is a fair prospect of having them tested here the coming season.

Honey is now put upon the market in such attractive form by our best apiarists, and such skill has been attained by a large number in the practical work of the apiary, and that number more rapidly increasing every year through the knowledge spread by our journals, that we must look in new directions for advance in our persuit. Science must come to our aid and suggest new methods of culture. New races must be tried. Much remains to be done before we can feel assured that we have reached the best results.

I would here return my thanks to Mr. Benton for the interest he has shown by translating Mr. Edward Cori's article on *Apis dorsata* for the American Bee Journal.

Shortly after the publication by the Harpers of Alfred Russel Wallace's Malay Archipelago, 1869, I sent seme extracts to the Journal on *Apis dorsata*. As an interest is springing up in this bee, both here and in Europe, I think it desirable to publish them again, that a greater number of readers may enjoy the promising facts given, which I consider even more encouraging than the statements given by Mr. Cori.

Wallace found this bee on the Island of Timor, and mentions bees or their products in Borneo Celebes, Gilolo, and the Aru Islands. Possibly *Apis dorsata* exists on many of the Islands, as well as in Java and Timor. Mr. Woodbury, of England, received specimens of this bee and comb from Ceylon, but failed to import it.

In visiting a house in Borneo, Mr. W. writes: "Almost all the people, however, were away on some excursion after bird-nests or bees-wax." .... The honey bee of Borneo very generally hangs its combs under the branches of the tappan, a tree which towers above all others in the forest, and whose smooth cylindrical trunk often rises 100 ft. without a branch. The Dyaks climb these lofty trees at night, building up their bamboo ladder as they go, and bringing down gigantic honey-combs. These furnish them with a delicious feast of honey and young bees, besides the wax which they sell to traders, and with the proceeds buy the much-coveted brass wire, ear rings and gold-edged handkerchiefs, with which they love to decorote themselves. In ascending durion and other fruit trees which branch at from 30 to 50 ft. from the ground, I have seen them use the bamboo pegs only, without the upright bamboo, which renders them so much more secure."

Mr. W. describes very minutely how the pegs are driven in the tree, and the bamboo ladder formed as they ascend these gigantic trees. One of the illustrations, (p. 204), copied from a photograph, represents a Timorese with a small water bucket in one hand, made of an entire unopened palm leaf, and in the other a covered bamboo, which "possibly contains honey for sale" .... Besides ponies, almost the only exports of Timor are sandal wood and bees-wax.—The sandal wood is chiefly exported to China, where it is largely used to burn in the temples and in the houses of the wealthy. The bees-wax is a still more important and valuable product, formed by the wild bees, (*Apis dorsata*), which build huge honey-combs, suspended in the open air from the under side of the lofty branches of the highest trees. These are of a semicircular form, and often 3 or 4 ft. in diameter.

I once saw the natives take a bees' nest, and a very interesting sight it was. In the valley, where I used to collect insects, I one day saw three or four Timorese men and boys under a high tree, and, looking up, saw on a very lofty horizontal branch three large bees' combs. The tree was straight and smooth barked, and without a branch, till at 70 or 80 ft. from the ground it gave out the limb which the bees had chosen for their home. As the men were evidently looking after the bees, I waited to watch their operations. One of them first produced a long piece of wood, apparently the stem of a small tree or creeper, which he had brought with him, and began splitting it through in several directions, which showed that it was very tough and stringy. He then wrapped it in palm leaves, which were secured by twisting a slender creeper around them. He then fastened his cloth tightly around his loins, and producing another cloth, wrapped it around his head, neck, and body, and tied it firmly around his neck, leaving his face, arms and legs comparatively bare. Slung to this girdle he carried a long thin coil of cord; and while he had been making these preparations one of his companions had cut a strong creeper, or bush-rope 8 or 10 yards long, to one end of which the wood torch was fastened, and lighted at the bottom, emitting a steady stream of smoke. Just above the torch a chopping-knife was fastened by a short cord.

The bee-hunter now took hold of the bush-rope just above the torch and passed the other end around the trunk of the tree, holding one end in each hand. Jerking it up the tree a little above his head, he set his foot against the trunk, and, leaning back began walking up it. It was wonderful to see the skill with which he took advantage of the slightest irregularities of the bark or obliquity of the stem to aid his ascent, jerking the stiff creeper a few feet higher when he had found a firm hold for his bare foot.—It almost made me giddy to look at him as he rapidly got up,—30, 40, 50 ft. above the ground; and I kept wondering how he could possibly mount the next few feet of straight, smooth trunk. Still, however, he kept on with as much coolness and apparent certainty as if he were going up a ladder, until he got within 10 or 15 ft. of the bees; then he stopped a moment and took care to swing the torch (which hung just at his feet) a little towards these dangerous insects, so as to send up the stream of smoke between him and them. Still going on, in a minute more he brought himself under the limb, and in a manner quite uninteligible to me, seeing that both hands were occupied in supporting himself by the creeper, managed to get upon it.

By this time, the bees began to be alarmed, and formed a dense, buzzing swarm just over him, but he brought the torch up closer to the hive, and cooly brushed away those that settled on his arms and legs. Then stretching himself along the limb, he crept towards the nearest comb and swung the torch just under it. The moment the smoke touched it, its color changed in a most curious manner from black to white, the myriads of bees that had covered it flying off and forming a dense cloud above and around. The man then lay at full length along the limb, and brushed off the remaining bees with his hand, and then drawing his knife, cut off the comb at one slice close to the tree, and attaching the thin cord to it, let it down to his companions below. He was all this time enveloped in a crowd of angry bees, and how he bore their stings so cooly, and went on with his work at that giddy height so deliberately, was more than I could understand. The bees were evidently not stupified by the smoke or driven away far by it, and it was impossible that the small stream from the torch could protect his whole body when at work. There were 3 other combs on the same tree, and all were successfully taken, and furnished the whole party with a luscious feast of honey and young bees, and a valuable lot of wax.

After 2 of the combs had been let down, the bees became rather numerous below, flying about wildly and stinging viciously. Several of them got about me, and I was soon stung, and had to run away, beating them off with my net and capturing them for specimens. Several of them followed me for at least half a mile, getting into my hair and persecuting me most pertinaciously, so that I was more astonished than ever at the immunity of the natives. I am inclined to think that slow and deliberate motion, and no attempt at escape, are perhaps the best safeguards. A bee settling on a passive native probably behaves as it would on a tree or other inanimate substance, which it does not attempt to sting.—Still they must often suffer, but they are used to the pain and learn to bear it impassively, as without doing so no man could be a bee hunter."

I consider this a very remarkable description. Very few men not practical apiarists would have observed as much and stated it as clearly. I regret that the arrangement of these "3 combs" is not given. It is to be hoped they were parallel and not a unicomb arrangement, lengthwise with the limb.

Two birds, bee eaters, are named Meropogon-forsteni, and Merops-ornatus.

I hope soon to be in possession of facts of still greater, practical interest, which I will communicate as soon as received.

E. Parmly.

19 W. 38th St. New York.

For the American Bee Journal.

My Bees.

For the first time in many years, the summer of 1877 found me devoting my entire time to the care of my bees, during the honey harvest. I started with 98 colonies in fair condition. Fruit blossoms were an entire failure, so the bees were late about filling up in numbers. I took a ton of extracted honey, and the same amount of comb, and increased to 127 colonies, which were put in the cellar during the last half of Nov. My bees were inclined to swarm more than I wished, and I suppose I was the loser by trying to prevent it. At first, I tried returning the swarms and cutting out all queen cells; but that seemed to make but little difference; they would come out again in a day or two. I tried hiving them in their own hive, and moving it to a new place, but they swarmed out all the same.—Then I hived the queen with a few of the bees, and gave them a single frame of brood, but the queen would swarm out with most of her little colony.

One trouble was that I had not prepared for them beforehand. I had not supers ready so as to give them plenty of room to work in, and they swarmed so much that I could only work mornings and evenings, making supers and getting them ready. But after a colony swarmed once, it did not seem to make much difference how much room they had.

Perhaps the most determined colony in the apiary was No. 30. June 16, I put on a super of novice sections, filled with foundation, and June 20 they swarmed. (I think it quite possible, that if the sections had been put on June 10 or sooner, they would not have swarmed.) I returned the swarm, or rather let it return itself, as the queen was clipped; and cut out all queen cells, taking away one frame of brood and giving in its place a frame of foundation. Next day, June 21, they swarmed again, and I took away 3 more frames of brood. June 22, they swarmed again, and as usual I caught the queen and gave her back after their return; and in a few minutes, out they came again. Then I took away all their brood, took off the supper, and left them nothing but empty frames and a little foundation; feeling determined that for once I would have my own way, and that the colony should not swarm anyhow. But in spite of all, out they came the next day, and I very humbly hived the swarm in an empty hive where it clustered, and it remained content. Examining No. 30, I found not a particle of brood in any stage, and but 1 egg, which was in a queen cell that was started on the foundation. As there was a fair colony of bees left, I gave them back their brood and a sealed queen cell.

I have never thought that the queen had anything to do with making a colony swarm, but a number of cases this last summer point quite strongly in that direction.—Frequently a queen has been spoken of as "leading out a swarm," but a queen is seldom among the first that leave, and is often among the very last; so that if she does have anything to do with it, she seems rather to stir them up and drive them out.

June 27, No 4 swarmed. I caught the queen, and put in an empty hive a frame of brood, with the adhering bees from a nucleus that had been queenless 9 days, and the queen was gladly accepted by them. This hive, containing the queen, I placed beside No. 4, and the next day the queen and most of the bees were gone. July 5, I opened No. 4, to cut out the queen cells, and found them destroyed; plenty of young brood and eggs, and the old clipped queen back in the hive doing duty. Did this queen give the swarming fever to the little nucleus, which was well shaded, and certainly had no previous inclination to swarm? Why should she be content back in the old hive?

Dec. 8, 1877. B. LUNDERER.

For the American Bee Journal.

Failure in Wintering.

For the benefit of my fellow bee-keepers, I will relate my sad experience of last Winter:

In the fall, a year ago, I had 53 colonies, nearly all strong. I was very anxious to save them through the winter, as they had rewarded me handsomely for my summer's care, and especially anxious about them as I had lost heavily during the last 7 years.

In accordance to some writer's directions in THE AMERICAN BEE JOURNAL, I procured lumber and made large boxes—1 for each hive; large enough to admit 4 inches of chopped straw around, under and above the hive. In place of a honey board, I used a quilt. Now for results:

By the 1st of Jan. nearly all were getting very uneasy, trying to get out of the hives, and exhibiting signs of disease. By the 1st of April, one third of the stock were entirely gone; middle of May, only about one-half were left, and they very weak. Will some one tell me why they died when I had taken so much pains to save them?

SPRING MANAGEMENT.

I do not feel like instructing the merest novice about *wintering* bees, but I may suggest some thing of use to the beginner, in regard to equalizing and building up a lot of weak stocks:

When spring opens contract the entrances, and make all tight and warm over the bees. Guard all the weak stocks very carefully from the strong ones, and contract their hive room to accommodate the size of the swarm. Take away extra combs, but leave plenty of honey. During cold windy days, discourage them from flying, by shading the entrance of the hives.

It is necessary that at least one-third of the entire number of stocks should be good and strong. When settled warm weather arrives, (say about the 1st of May, but not before for this latitude), begin to equalize. Take from the centre of each strong stock two combs of hatching brood,—bees with them, if sure you leave the queen in her own hive, and give one of these combs to each weak stock, placing it in the centre of the cluster. Then make all warm again and wait 10 days, supplying the strong stocks with good empty worker-combs to replace those removed, and keep a record of your operations.

Always select the oldest or hatching brood to give the weak ones.

If hives have plenty of honey, I don't think it pays to feed them to stimulate breeding in the spring.

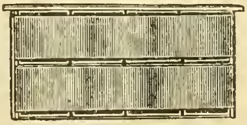
The above is just what I practice every spring, if I have poor stocks; I find it pays well, though it makes some trouble.

Freeport, Ill. PRESCOTT YOUNG.

For the American Bee Journal.

Tin Separators.

Mr. Heddon, in THE JOURNAL for Oct., writes: "I find Root's method of putting these frames, (sections), within frames, very complicated and troublesome, compared to the method I use." Will Mr. Hedden please explain his method, for the benefit of many who are inquiring for the best way—the least complicated and troublesome way? And, if he uses the tin separators, will he give size of tins, compared with combs to be built, and the manner of readily adjusting them, and changing them from one case, when filled, to another empty one?



LANGSTROTH FRAME WITH SEPARATORS.

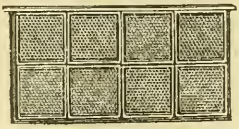
I suppose our large producers in the East use separators, (certainly Mr. Hetherington's fine display at the Centennial—each section comb encased in six pieces of glass, could not have been secured with such uniform regularity without them), and perhaps our western producers also; yet, but very little mention is made of them in the bee-papers, and I do not remember seeing any illustration of them in THE AMERICAN BEE JOURNAL.

Common bee-keepers are becoming dissatisfied with any way as soon as they think there is a better one; and to have heard a little of separators, stimulates inquiry.—Shall they look to THE AMERICAN BEE JOURNAL for illustrations of them?

In same number, Southard & Ranney give cut of their case or rack, for sections. The sheet-iron rests, with edges turned up, will undoubtedly work well. I have tried common hoop-iron, but it is not stiff enough, and so thin, that in turning up, the bees fasten the two cases together so tightly, that in lifting off the upper one, the tops of sections are torn from the lower ones.—Strips of wood-work are better, but the bees spend too much time in sticking them down. I think they might neglect the edges of metal, as they do the tin corners. *Where can we procure such rests?* "The rack sits on the frames." Does it also sit on top of hive, closing it bee-tight? If it closes at the bottom, then, by covering the glass, could we not dispense with the super? But then, in tiering up, would it close bee-tight? Hope you will describe some of the manipulations in working them. Will you also instruct us how we may obtain sections at 2 mills each. The difference of mills on each one is not much, but $8.00 on every thousand is worth looking after. Could a set of tins for this rack be fastened to a frame work, and all be let down together between the sections when ready for the bees?.

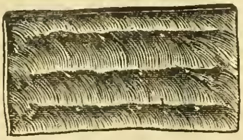
Among the many interesting essays in the Nov. AMERICAN BEE JOURNAL, I found in one by Mr. Metcalf, an expression of opinion in regard to "pure queens, and pure progeny," which I have been expecting to find in each succeeding number. I believe he has given voice to the private thoughts of very many. Facts in one's experience are stubborn things, and do not yield gracefully to any theory with which they are not in harmony.

That an intelligent, truth-loving apiarist can spend season after season among his bees, improving, and testing them, and then go into his study, and "in the presence of the innermost, holiest of conscience," as Rev. Joseph Cook might say—deliberately put pen to paper to teach beginners the "drone theory of the books," has been to me, for years, a source of wonder. The suspicion that he uses *separators* between himself and his conscience is not to be entertained; therefore useless, any inquiry as to how *these* may be worked.


LANGSTROTH FRAME WITH SMALL SECTIONS.

Ridgeville, Ill. A. L. GOULD.

[Above we give a view of a Langstroth frame (2 inches in width) filled with 8 sections, 4¼x4¼ each; and another showing the use of the separators. The latter are pieces of thin tin, tacked at each end to the sections, to be easily removed when the frames are filled. Their use is to keep the combs straight. About ¾ of one inch should be left between the two separators, and their size must be governed by the size of the hive used. The separators should not come nearer than about ½ inch to top or bottom of frames. Some favor separators, while others prefer to use foundation without them. If friend Doolittle is still using them, he does not say so in his article in this issue. Will he please give his experience with them to our readers? The rests used by Dr. Southard can be made by any tinner. Take strips of sheet-iron 2 inches wide, and turn up ¼ inch on each side for the centre—only one edge turned up for the ends. The rack sits on the hive, making it bee tight. Will Dr. Southard please give us his manipulations for our next issue?—ED.]


NOVICE'S CHAFF CUSHION.

Foreign Notes,

GLEANED BY FRANK BENTON.

☞ The following is the translation of a letter recently received:

Monselice, Italy, Nov. 28, 1877.

MON CHER M. FRANK BENTON:—I await from day to day the bees of the island of Java which I am to receive at the port of Venice.

I believe *Apis dorsata*, of the island of Java, to be the best, whether we consider its size, which enables it to collect much honey, or whether its large proboscis, enabling it to obtain honey from flowers that our bees cannot collect from on account of their short proboscis.

I think that it is unnecessary to make a journey to the island of Java, because professors of natural science are there who would be able to procure and send the bees.

As to the Cyprian bee, it is more yellow than our Italians, but possesses no other special points.

With sincere respect, I am yours truly,
JOSEPH FIORINI.

"THE year 1877 is, decidedly, to be reckoned among the unlucky years for apiculturists."—*L'Ape Italiana, Turin.*

"In consequence of an exceedingly changeable spring, followed by a hot, suffocating summer with a prolonged drouth which dried up the sources of honey, this year has given few swarms and but little honey."—*L'Apicoltore.*

☞ In a letter to *L'Apicoltore*, Milan, Sig. Ginseppe Fiorini, who has undertaken the importation of *Apis dorsata* to Italy, remarks: "I should be proud to be able to import this race of bees to our beautiful Italy, for I would like to have the names of our Italian apiarists praised as well as those of other nations, and that it might be said the Italians first imported *Apis dorsata* to Europe."

PARIS EXPOSITION.—The October number of *L'Apiculteur* (Paris) states that the assignment of space to exhibitors in class 83, at the Exposition of 1878, has not taken place, as yet, because of changes in the proposed location and arrangement of articles in this class. It says that the area, 800 metres, first asked for would not have been too much, yet the request had to be lowered to 400 metres, and 260 metres will be granted the department. It seems the plan is to exhibit the products of the apiary only in connection with the various agricultural products. *L'Apiculteur* remarks: "Not being united the products of the apiculturists who have requested of the departmental Commission or of the Agricultural Society in session, space in which to exhibit, will be scattered throughout the agricultural exhibit, and will neither be seen by the public or viewed by a special committee. What the exhibitors ought to do is to state to the said Commission or Society that they expect to exhibit only in Class 83, to refuse to exhibit elsewhere, and to address immediately a request to the Minister of Agriculture that their products be admitted to Class 83. It is not too late, but there is no time to lose."

Conventions.

Western Illinois Convention.

Second semi-annual session, held at Oquawka, Henderson Co., Ill., Oct. 2 and 3, 1877; President Kellogg in the chair.

The first business called was the admission of new members, when the following persons enrolled their names:

Chas. Dadant, Hamilton, Ill., (by letter), C. P. Dadant, Hamilton, (by letter), D. D. Palmer, Eliza, Martin Wort, Keithsburg, L. H. Scudder, New Boston, C. W. Green, Oquawka, M. T. Sharp, Oquawka, A. A. Clark, Oquawka, Wm. O. Atkinson. Vermont, L. C. Meadows, Abingdon, Stephen Kennedy, Rosetta. A. M. Blakesly, Rock Island, Dr. I. P. Wilson, Burlington, Iowa, Geo. Bischoff, Burlington.

Lady members: Mrs. L. C. Axtel, Roseville, Mrs. H. L. Scudder, New Boston, Mrs. W. O. Atkinson, Vermont, Misses Fannie E. Roberston and Susan R. Meadows, Abingdon.

Election of officers for the ensuing year resulted as follows: Pres., D. D. Palmer, Eliza, Ill; Sec., W. M. Kellogg, Oneida; Treas., T. G. McGaw, Monmouth; Vice Pres'ts, N. H. Derr, Keithsburg, and Jas. A. Simpson, Alexis.

Motion carried that there be an annual fee of 50 cts. to pay for lights, hall rent, printing, etc., and that ladies be admitted free of charge.

Motion made and carried that subjects for discussion be selected by those wishing information.

THE BEST METHOD OF CATCHING BLACK QUEENS, AND INTODUCING ITALIANS.

Simpson—black queens are apt to run. I take out the frames one by one, look carefully for the queen, and set the frames in an empty hive. If I don't find her thus, I put the combs back, but first shake bees down in front of the hive on a cloth, and look for a queen as the bees travel in, and usually find her. After catching black queen, I cage the Italian queen and put the cage in the hive, in contact with honey; leave her caged 24 hours, then release her, (if by the action of the bees I deem it safe), sprinkling queen and bees with sweetened water or honey; handle bees carefully while doing this.

Haines—confine queen in cage 24 to 48 hours, then dip in sweetened water, and in 9 cases out of 10, queen is well received; best time to find black queen is 3 or 4 p. m.; for holding frames, prefer a frame of 4 corners, instead of hive, and set in front or one side of hive to let dropped bees run into hive.

McGaw—after years of experience I find this plan good: Drive bees into cap of hive or box, place hive on one end of a cloth, the box of bees on the other, make the bees cross over to hive by dipping a few out to get them started; find the queen while crossing. Scent the bees with oil of anice, 10 or 15 drops in alcohol and water, douse the Italian queen in also, and introduce at once; I adopt this plan when away from home and in a hurry, if at home would take a slower method.

Kellogg—cage Italian queen and place on top of frames, under quilt or honey board; on the morning of the third day look through hive, and pinch off all the queen cells and close the hive; afternoon of the same day open hive very carefully, daub queen in a half cup of honey, daubing her all over; drop into hive with a spoon and sprinkle the ballance of honey on frames and bees; close the hive and do not open it again for at least 2 days; many a queen has been lost by opening the hive too soon after introducing.

DO BEES START QUEEN CELLS WHILE QUEEN IS IN CAGE?

McGaw and Kellog never saw it otherwise. Atkinson never saw it done.

Palmer—Find black queen by a plan similar to Simpson's, introduce Italian queen by daubing thoroughly in honey and pouring in honey, queen and all; black bees sometimes keep on raising queen cells after the Italian queen is introduced, until all the black bees are gone.

Axtell—Introduce Italian queen in wire cloth cage; by leaving the cage on top, one is liable to forget it for several days. Have tried another method; use Quinby's hive, take an open-end cage, take off side of hive, cut a hole through the comb, leaving the plug of honey in the hole; crowd open end of cage over this plug; bees will lick up honey, eat out plug and the queen is safely introduced.

Simpson—Mr. Axtell's plan is not good for top-opening hives.

Axtell—Take a piece of comb, cut the hole through and use on top the same as on the side of frames.

Meadows—What is the safest length of time to keep queen in cage before releasing?

Ans.—No certain time—from 24 to 48 hours.

Wirt—How do you make the bees *hold still* while handling?

Ans.—Use rotten wood smoke.

Meadows—At what time of the year is it best to introduce queens?

Ans.—For a new beginner, when there is a good flow of honey; for old hands, almost any time.

HOW MANY HAVE SEEN FERTILE WORKERS?

Scudder—Have had a good deal of experience with them, think there are such *birds*; worked with a swarm all summer, putting in bees and queens; made a failure and had to own up beat by a fertile worker.

Simpson—Had a second swarm, gave them comb, and in two weeks were queenless, gave them a queen cell twice, destroyed by fertile worker, gave caged queen, released in 18 hours and accepted.

Palmer—A stock in the fall, weak or queenless is not worth fussing with.

THE BEST PLAN FOR UNITING, IN ORDER TO PREVENT THE BEES RETURNING TO THEIR OWN STAND AND FIGHTING.

Simpson—I have my nuclei in circles, entrances outward in fall; slowly bringing entrances close together, then unite in one hive, and remove all the nuclei hives.

Kellogg—Sprinkle all the bees with sweetened or scented water and shake bees down in front of one hive, and let them crawl in together, giving the best combs from both hives (or more) for the new stock; look out for robbers.

WHEN IS THE BEST TIME TO PUT IN QUEEN CELLS AFTER REMOVING THE OLD QUEEN?

McGaw—At once.

Wirt—What position do you put cell in?

McGaw—Point down.

Atkinson—Either end up, if well advanced; if not, point down.

Kellogg—Rather wait 12 hours before putting in queen cell.

Meadows—Does age of colony, strong or weak, make any difference?

McGaw—No.

THE BEST MODE OF INTRODUCING VIRGIN QUEENS 4 OR 5 DAYS OLD.

McGaw—Introduce as soon as hatched.

THE BEST METHOD OF SWARMING.

Palmer—I have found it of no use to try to return a first swarm; I use a registering slate on each hive. Always use it on the same side of each hive, and always open each hive on the same side; when a swarm comes off, I mark the date on the slate, return all second swarms, or sometimes put 2 or 3 together.

McGaw—I put a laying queen in the old stock.

Palmer—If I want to increase, I buy the best queen to be found; use a large hive, maybe 20 frames, give it lots of brood; after a time take the queen away, let the bees build queen cells, then break up the stock into nuclei of 1 or 2 frames each, giving each a queen cell. After each nucleus has a laying queen, build it up from strong stocks by giving brood and bees.

Simpson—In the spring I take 2 combs, each from strong stocks to form my nuclei, fill the rest of the hive with comb-foundation. Place 3 nuclei hives near each other and raise my queens there; as soon as my stocks are strong enough to warrant it, I move a strong stock to a new place; give new stock on old stand one or two combs and a queen from a nucleus; keep nuclei strong by giving fresh brood and bees as often as needed; having my nuclei near together, I can easily unite then into one swarm in the fall.

McGaw—I prefer natural swarms, but if they don't swarm by June, and are strong, I divide.

Scudder—I consider McGaw's plan best; keep bees strong and go slow; light stocks are no profit; hold down increase as much as possible and get all the honey I can.

McGaw—It takes from 15 to 20 lbs. of honey to make 1 lb. of comb, so make as little new comb as possible.

Palmer—The extra amount of honey got by keeping down swarming, will more than buy the swarms you would have got by letting them swarm. I keep down swarming by giving plenty of box room; use a double-portico Langstroth hive, entrance at both ends of the hive, 4 Harbison section boxes on top, cap of hive extends out over each portico, so my boxes cover more surface than the main hive; take off boxes as fast as each one is filled; thus giving them plenty of room, keep well shaded, ventilate well; I never tier up boxes.

Scudder—Much depends on locality; I think where I depend on fall forage, I get more honey by having bees in two stocks than I would were they in one, but if the forage is greater in spring, keep down swarming, put on boxes to get early forage.

THE MOST SUCCESSFUL PLAN OF GETTING THE GREATEST YIELD OF HONEY.

McGaw—Keep from swarming and buy your increase.

Palmer—If I had a few stocks and wanted to increase, would stimulate in spring, use graham flour, honey or sweetened water, use a universal feeder, (a large tin can with small holes in the bottom), turn it bottom side down in a tub, (holes down), which will make it air tight. Feed in the open air, and spread brood combs; as fast as the bees can use them, put in empty comb. Divide strong stocks early. Think this plan better than the natural swarming. I put my feed tub 40 ft. from hives.

Scudder—I have robbing from that kind of feeding.

Palmer, Scudder, and McGaw think Italians will rob more than blacks.

Wirt—My black bees will not fight the moth worms.

All concur in this. At this point a discussion was had in regard to bees robbing late in the fall of the year. Many thought it was caused by the space left by the hatching bees, this being unfilled by the queen, the bees are crazy to fill this space with honey.

Kellogg—I think it is caused more because bees must have something to do; can't stand being shut off from their work so short.—Bees will rob when their hives are filled with honey.

WHAT IS THE BEST WAY TO GET BEES OUT OF HONEY BOXES?

McGaw—To take off boxes and place beside the hive won't do when no honey is coming in; robbers will bother.

Scudder—Number all boxes to tell what hive they came from. After most of the bees are out, turn boxes wrong side up placing empty box on them; bees pass from full boxes into the empty one on top.

Palmer—Take off boxes, turn bottom up, and place on cap of hive from which boxes were taken, and cover each box with an empty one; bees will soon go up and cluster in an empty box, and then go around and shake bees down in front of hive. To get out the few bees left in boxes, carry the boxes into honey room, set them on their sides, 8 or 9 high; in the morning those left will be in one or two boxes.

Wirt—I have a dark room in cellar, with outside window darkened and set boxes on bench near window, with ladder to window; bees leave readily and go out doors,

Atkinson and Palmer—To drive bees with the breath, must blow hard, not a light puff. The breath of a bee-keeper must not be scented by strong substances.

Jarvis—I use a part of the plan of Adam Grimm. Have several nuclei, and put my boxes in a large box, bottom up; take one or two frames from a nucleus, and put them in a small hive on top of boxes on small blocks, bees gather in nucleus hive, then shake them off in front of nucleus, from whence take and put the frames back in the hive where they belong.

HOW CAN WE BEST PROTECT OURSELVES FROM BEE STINGS?

Scudder—Bees dislike black or dark clothes; gloves should be light colored and smooth.

Meadows—Have used all kinds of gloves and veils, but work kindly and carefully without and find them not so cross as when handled with protection on.

McGaw—There is a vast difference in bees and the time of the year when handled.

Several present had been badly stung by handling bees after dark.

Palmer—Clothing worn until dirty and full of bee stings ought to be changed and washed twice a week.

Mr. Palmer here showed his "bee shirt;" it has four buttons on wristband and three buttons on left shoulder, no opening on back or in front, and no bees get in; uses a straw hat and a bobinet veil.

DOES FREQUENT BUT CAREFUL OPENING OF HIVES AND HANDLING OF BEES INJURE THEM IN ANY WAY?

Haines—I think it does not.

Wilson—Frames should be put back carefully and in the same place as before, else there is a loss of time in bees fixing up broken places.

Kellogg—Think the loss of time not noticeable.

Palmer—Never open a hive unless you have to. My frames must fit any where, in any hive; let us have our combs straight, then there is no trouble.

Opinion of the society—no harm is done.

Palmer—I have my hives so that I always open on the same side. In putting in queen cells, cages, etc., always put in on one certain frame; I invariably use the third frame.

Meadows—I think the advantages of frequently opening hives and taking care of bees, greatly overbalances the disadvantages, if any exist.

Axtel—The more I handle my bees the more gentle they get, and I get more honey.

THE BEST PLAN TO START BEES WORKING IN BOXES.

Palmer—Take three or four frames out of hive, extract and put back in centre. In cleaning up dripping honey, the bees get a stream started and run clear up into the boxes at once. When I find brood in boxes, I mark the date on box, and return to hive; after time enough has passed for it to hatch, I again look at it, and if all are hatched, I take box off, if not, I replace for a longer time.

Kellogg—Would add to Palmer's plan as above, a sheet of comb foundation in centre frame of box, for a climbing place for the bees; would rather cut out the brood and let bees refill with honey, as comb that has brood in it is tough.

THE BEST METHOD OF WINTERING BEES?

Axtel—I use the Quinby hive, take out side frames, put quilts down sides and on top, and pack empty space with chaff, and winter on summer stands.

Palmer—Winter none but strong stocks, no nuclei; use dry cellar if we can, divide bee part from the rest of the cellar; keep dark and pure air; thermometer not below 32° nor above 50°; have opening in chimney at bottom of cellar, thus keeping bottom of cellar dry and no mouldy combs; to ventilate hive, raise one corner of honey board on little stick, caps off.

Wirt—I use a cellar in sand; have various kinds of success, good, bad and indifferent; fill caps with straw, ventilators in cap; rather have bees in cellar by themselves, thick straw packing one of the essential points of safe wintering.

McGaw—You will save from ½ to ⅔ of your winter stores by wintering in a cellar. Put heavy or strong stocks at the bottom, light ones on top.

Palmer—My cellar has 4 windows covered with wire cloth on the outside, space packed with straw; windows on hinges inside, which I open and close according to variation of thermometer.

Atkinson—Our worst trouble is to keep bees cool in a warm spell.

Axtel—Packed in chaff my bees need a temperature of 36°.

Wilson—I winter in a cellar, and have uniform success; I return each hive to the same spot it occupied the fall before.

Palmer—Circumstances will show which is best. If there is snow on the ground when bees are put in cellar and none on when they are put out in the spring, I think it makes no difference as to previous place, and *vice versa*.

Kellogg—Always carry bees out at night, it is much better than in the day time, then the bees begin to fly gradually in the morning and not at once as they do when put out in day time.

Jarvis—Put bees out at night and place on stands just as it happens and find no trouble, keep bees in cellar built in sand bank, from about Nov. 6.

McGaw—Put my bees out without regard to previous place; keep in cellar from 5 to 6 months.

Bischoff—Piled hives in a row covered with boards and straw, a warm day came and bees flew out, returned to old stands and perished.

Haines—Winter on summer stands; let them stand just as they were all summer; never lost any; colonies packed in chaff were a failure, flew out in the snow, and dwindled in spring; use Quinby's hive.

Simpson—In the winter of 1872-3 I lost equally on summer stands and in cellar.

BEE HOUSE.

Palmer—I want a bee house, for wintering bees, storing honey, extracting, a shop, etc. I want to build of brick in a side hill, so that when I am working in the house I can see the bees swarming, etc.

Simpson—Would build about 14x20, two stories, upper story divided into 2 rooms so I could keep one dark.

Kellogg—Would have wire cloth windows and doors made in such a manner that bees could all go out but none get in, will have a model at our next meeting.

Axtel—The doors to my honey room are double, and in the worst cases of robbing have no trouble; doors have one foot space between.

Wilson—Where you have no side hills, would advise using the old-fashioned cellar-cave, about a foot under ground; roof covered with dirt, sod, etc,. and very dry.

Axtel—Think a cellar for bees and a house for a shop can be built cheaper separately than both in one.

Haines—Can bees hear a sound so as to be disturbed by it in winter? Several think not, but feel the concussion or jar.

WHAT SURPLUS BOX SHALL WE USE?

Scudder—I like the Harbison section-frame-box best.

Kellogg—Would prefer a surplus box made up of frames, so that each frame can be taken out without taking the box to pieces; do not like the small 6 lb. boxes,—would not take them as a gift.

Axtel—I use the small frame, set on top of hive loose, three frames fastened end to end by a narrow strip on top, and one clinch nail driven through it into each frame; use as many rows as hive will accommodate.

Atkinson—I use a similar frame and like it very well.

McGaw—Showed the Oatman single comb box, glass on two sides. It depends on the demand, which box I prefer. If I can get 12½ cts. for honey in 40 to 50 lb. boxes, it would pay better than fancy boxes at 20c.

Palmer—Use the Harbison section-box; like it best of anything; this box, in the fall when robbers bother, is more easily taken off than loose frames.

Wirt—Use Harbison small frame (not the section), don't like it. Use another called the Severance frame; hangs in a box; has wooden division boards with holes in; like it very much, though I think it can be improved. Would not the tin separators, used by some, be better with holes in them?

Atkinson—Don't think it will pay for the trouble.

WILL ITALIANS WORK ON BUCKWHEAT AS WELL AS BLACKS?

Ans.—By several, yes.

HOW SHALL WE FASTEN COMB FOUNDATION IN THE SECTION BOXES?

Simpson showed a machine by which it can be put on by foot power; it is also adapted to frame making; a bar of iron presses the comb foundation to top bar of the box.

Kellogg—I soften the comb foundation by exposing to sunshine or stove heat, have a cup of hot water and a putty knife; lay frame on table, top down; lay strip of comb foundation on top bar, edge of comb foundation coming just a little beyond centre of top bar; take putty knife and give it a dip into hot water and mash down about 1-16 of an inch of comb foundation on to the top bar, the whole length of comb foundation, then turn comb foundation up so that it will hang down when the frame is turned right side up; can do it very fast; it gives a strong fastening if done right.

WHERE SHALL WE STORE HONEY?

Several—In as dry a place as possible; not in the cellar.

Bischoff—I closed up my boxes of honey to keep honey from sweating; it did not prevent it.

Atkinson—Think sweating is caused by moisture condencing on the surface of the comb.

SHALL WE USE COMB FOUNDATION? WILL IT PAY? WHEN AND WHERE?

Kellogg—It will pay; would use it for guide combs in surplus boxes in preference to comb; where there is but a light though steady yield of honey, would use it in brood frames, and in light stocks, frames nearly full of it, but when there is a great flow of honey would only use for guides and in nuclei stocks. Strong stocks break it down in great honey yields; would advise those who try it to get five cells to the inch, then you can use it both for brood and surplus boxes.

McGaw—Used 5 lbs. of white comb foundation, but would never buy it again; prefer the yellow for all purposes.

HOW TO PREVENT SWARMING.

Scudder—Nail wire cloth over the porticos.

Atkinson—Wouldn't brimstone be as good?

Palmer—Tried wire cloth once; combs all melted down, learning me a lesson.

Axtell—In fall, save all empty combs fit for surplus frames; in spring, have honey boxes all ready and as soon as honey comes freely, put on boxes at once, with one empty comb in centre of box, one to each hive, more if possible. Put a few boxes on at first, then more, as fast as needed. Queen must have room for brood in early spring; change boxes as fast as filled.

McGaw—I use about the same plan; cut out queen cells as often as I can, and put in an empty frame.

Wilson—I advise the plan of keeping one or more light stocks to build comb foundation, and to trim up combs from transferred stocks, giving them combs from other stocks.

Haines—Advise using holes five thirty-seconds of an inch in diameter to keep queen from going out.

Atkinson, Palmer, McGaw, and others, think it impossible to do it in that way.

Palmer—Use large entrances; ventilate well; give large amount of box room; shade well.

HOW SHALL WE GET STRAIGHT WORKER-COMB?

Atkinson—Use comb foundation 4 or 5 inches deep in the frame,

Kellogg—I used it that way, and the bees built much of it down with drone comb.

Scudder—Tip hive forward, examine every few days and straighten comb if crooked.

Axtel—In a new swarm give 1 full comb in center; as fast as bees get frames nearly full, spread and put empty ones between.

Palmer—Use all weak or nuclei hives as comb builders; strong stocks for boxes.

PURITY OF QUEEN.

Haines—Give a black stock eggs, laid by a pure Italian queen, and let them raise a queen from those eggs; is that queen pure?

McGaw, Palmer, Atkinson, Scudder, Kellog, Axtel and others answer, yes. Haines, no.

WHICH WAY SHOULD HIVES FACE?

1st preference, south; 2nd, east; 3d, west; 4th, north.

WHICH WAY DOES A SWARM FLY?

Atkinson—When bees swarm do they fly in a uniform direction in regard to points of compass? A Majority of the members think they do.

Scudder—I think they fly in the direction from whence their supplies come.

Wilson—I think wind blowing the scent from flowers draws them.

A NEW DEPARTURE—PRIZES.

A letter was read from Chas. Dadant & Son, regretting their inability to attend our meeting, and offering the following plan for approval:

At the spring meeting all the names of the members present be written on pieces of paper and put in a box. Then some one be appointed to draw out names. The first name drawn will be entitled to a full colony of bees, with an imported queen. The second name drawn will be entitled to an imported queen. Both the above offers given in the name of Chas. Dadant & Son.

Other members, not to be outdone, offered the following:

Hardin Haines, for the 3d name, an imported Italian queen; for the 4th name, a queen bred from an imported Cyprian queen.

T. G. McGaw for the 5th name, a tested Italian queen; for the 6th name, a dollar queen.

D. D. Palmer for the 7th name, 1 doz. "Sweet-Home" raspberry plants; and for the 8th name, 1 plant of each of the following: Doolittle, Mammoth Cluster, Golden Thornless, Davidson's Thornless, Seneca, Miama, Ganargua, Brandywine, Philadelphia, Lumb's Ever-bearing and Brinkley's Orange.

The society accepted the plan and offers, and voted thanks to the doners.

RESOLUTIONS.

Resolved, that we thank Mr. Hodson for the free use of his hall; may his life pass sweetly and pleasantly.

Resolved, that our thanks are due to the proprietor of the Smith House for the low rates given to bee-keepers, good fare, good beds, and especially, courteous treatment.

ARTICLES ON EXHIBITION.

T. G. McGaw, jars of extracted, white clover, and buckwheat honey.

J. Oatman & Co., two-glass, single comb and Novice's new smoker.

W. O. Atkinson, and M. T. Sharp, loose section frames of honey and Novice's two-inch Langstroth frame of sections.

Hardin Haines, a neat, black walnut case, holding one comb (Quinby) with Cyprian queen and a few of her workers among a lot of hybrids and Italians: the members present could see no difference between the so-called Cyprian and the common Italian.

W. M. Kellogg, home-made honey extractor, straight and curved blade honey-knives, bee-feeder. King & Quinby bellows smokers, box of 12x18 in. sheets comb foundation, and box of Harbison's section-frames, full of honey; also specimen copies of the three bee papers for distribution.

Jas. A. Simpson, honey plant and seed, with honey gathered therefrom, *Scrofularia Marylandicae*; machine for putting on comb foundation; and an insect called the "red-eyed *cicada*," very distructive to bees.

D. D. Palmer, a little 2x3 inch slate.

A number of ladies cheered us by their presence, and also many townfolks. One lady came several miles, who was so sick she could not keep up all the time, but was so interested in bees she "couldn't keep away." Plucky Mrs. Axtell.

Adjourned to meet at Burlington, Iowa, Tuesday and Wednesday, April 23 and 24, 1878. D. D. PALMER, Pres.
WILL M. KELLOGG, Sec'y.

North Missouri Convention.

Met at McCredie, Callaway Co., Mo., Oct. 29: Pres. Hamilton in the chair. After reading the minutes of last meeting Mr. J. A. Reed, of Hallsville, and Dr. T. W. Reed, of Macon City, were received as members.

COMMITTEE ON PRICE OF HONEY.

We, the committee for the investigation of "bulk and prices of honey" beg leave to report, that from all the points of inquiry, we find the crops are short, not exceeding one-half our former crop, and prices proportionately higher. From Cincinnati C. F. Muth reports: Extracted honey, 12 @ 15 c. per ℔; box honey, from 18 @ 22 c. per ℔.—C. O. Perrine, of Chicago, reports: Extracted, 12 @ 17 c. per ℔. From New York no box honey is reported; extracted 11 @ 15 c. N. P. Allen, of Ky., reports, extracted 15 @ 18. From Monmouth, Ill: Extracted, 12 @ 15 c. No box honey in the market.

P. P. COLLIER, } Com.
J. P. SALLEE, }

It was asked, Shall the committee be discharged?

W. W. Trimble suggested that the committee be continued, and R. L. Davis and H. Hamilton be added to the committee, and report at our next regular meeting.

Bills were presented by P. P. Collier and J. A. Hamilton for stamps and stationery, used for Association.

The Treasurer's report was then received.

The constitution was amended so that ladies are admitted as members free of charge.

It was suggested that each member use his best efforts to secure a prompt attrndance of all interested in progressive and scientific bee culture. Also, that we do all in our power to bring honey into more general use, to supersede the worthless sweets now in the markets.

IS COMB FOUNDATION ADVANTAGEOUS?

This subject was discussed in a masterly way, in a very able paper, by P. P. Collier, in which he showed the great saving of honey to the bees. Econemy of time in comb building and as a means of securing worker-comb, inducing bees to work in sections or boxes.

W. W. Trimble—Can any one tell what proportion of the bees are engaged in the construction of comb?

President—Some say two-hirds.

A. A. Collier—Does not wax grow on all worker bees alike? He has seen the wax protruding from under the scales of bees while at work; believes it is removed by the young bees, and comb constructed of it when it becomes burdensome.

W. W. Trimble spoke of the advantage that must arise from the use of comb foundation, and asked: If bees fill a hive with comb, how long will they be in doing it?

P. P. Collier—Nine days is the shortest time in which bees will fill a hive.

W. W. Trimble thinks it takes his bees from one to three months to fill their hives.

P. P. Collier—Wax is as natural a production, after eating honey, as is fat by a hog after eating corn.

W. W. Trimble—The secretion of wax by the bees is like the secretion of milk by the cow; it is increased in proportion to the amount of food consumed.

A. A. Collier—Bees produce no wax in cold weather.

J. P. Sallie—The whole matter of the production of wax is speculation. At certain periods in a bee's life they produce no wax. When they do not have access to the fields, they produce no wax. They obtain it from flowers.

Secretary—Among the experiments of Huber is that of confining bees in a hive and feeding them honey, to see if they would produce wax, which they did in a very short time.

Association adjourned until Thursday, 2 p. m.

Dr. T. W. Reed, of Macon, called the attention of the Association to a model hive, which presented some valuable features, showing that its inventor was familliar with the nature and habits of the honey bee.

A report was then taken of the number of stock of each last spring, the increase and the amount of honey taken.

H. Hamilton reported 77 in the spring, increased to 152; obtained 5,250 lbs. extracted honey.

S. S. Riley had 4 in the spring, increased to 10; took 250 lbs. of honey.

P. P. Collier reported 11 in the spring, increased to 17; obtained 500 lbs. extracted honey.

J. J. Crowson began in the spring with 11, increased to 44 and sold $30 worth of honey at 12½c. per ℔.

A. A. Collier had 11 in the spring, increased to 14: obtained 675 lbs. of honey. Obtained 204 lbs. in seven days. Sold his crop at 12½ and 15 cts.

J. L. Craig, 1 hive in the spring, increased to 11; obtained 160 lbs. extracted honey.

J. P. Sallee reported 50 in the spring; obtained 1,500 lbs. honey, 300 of which was box honey.

P. P. Collier had found old combs to be of great value in facilitating the work in new swarms. Has in his apiary 15 or 16 frames of comb, composed entirely of small pieces fastened together by dripping melted wax in the seams; finds it necessary to have the same edge of the comb up as it had in the original hive; had found it of great advantage in inducing bees to work in boxes; he destroys moths and eggs by the use of brimstone.

S. S. Riley asked, "How can you tell the differance between a moth's egg and that of the queen?

Mr. Collier said, "The queen deposits only one egg in a cell, while the moth miller lays her's in clusters; the eggs of the queen are larger.

Mr. Crowson has seen two eggs in a cell.

Pres. They were probably the work of a young queen, or fertile worker.

H. Hamilton had considerable experience with old combs; they were of great advantage; made seventy-five new swarms this season, gave them combs of bees that had died the previous winter, and in two weeks were very strong.

Mr. Crowson asked how long old combs may be used.

Hamilton has used comb for eight years, and they are as good as new.

Mr Collier was of the opinion that old combs do very well for honey but are not so good for brood, as the cells are made smaller by the cocoons, and the bees raised in old combs will be diminished in size.

On motion Dr. T. W. Reed, of Macon, was elected Vice President from Macon, as the constitution provides that each county represented shall be entitled to a Vice President.

Moved and carried that the present officers hold their offices until next regular meeting, which will be held in Martinsburg on the third Wednesday in May, 1878.

The following resolutions were unanimously adopted:

Resolved, That the Association tender its thanks to the owners for the use of this hall.

Resolved, That we, the members of this Association, return our heart felt thanks to the citizens of McCredie and vicinity for the generous hospitality extended to us.

On motion the Association adjourned to meet in Martinsburg on the 3rd Wednesday in May, 1878. H. HAMILTON, Pres.

J. A. HAMILTON, Sec.

Michigan Convention.

The eleventh annual convention of the Michigan Bee-keepers' Association met at Adrian, Dec., 19, 1877. Prof. Cook in the chair. The Secretary being absent, Mr. A. Fahnestock, of Toledo, was elected secretary *pro tem.* The treasurer, Mr. J. Heddon, being absent, he sent the following letter, which was read:

Dowagiac, Mich., Dec. 17, 1877.

DEAR PROF. COOK:

"Up to this evening, I expected to be with you in convention. Warm weather, and housed bees, forced me to stay and take care of them. We go to conventions to learn *how* to take care of bees. We stay at home to *do* it. I send you by mail my feeble effort at a paper on "Honey Markets," also P. O. order for $4.00, the amount of money in the treasury.

I also send you a sample of honey-boxes, and section-frames, made in New England, and of which I have the agency in this state. I expect to sell them as low as they could be got at the factory. They are made of young spruce wood, and are the nicest boxes I have seen. I have also invented the cheapest and best case for shipping boxes, (glassed), or section frames, not glassed, and had it ready to bring; but now it must stay at home. I *think* it is best, at least. If I were with you, I should endeavor to prove that all boxes should be glassed before put to the bees. When boxes are made as these are, so that the glass passes by the edges *all around*, there is no danger of daubed glasses; and such boxes are honey tight, if a comb *should* leak.

I still think, and shall be frank enough to say, that I think there is already honey enough produced to supply all future demands, at any price that will pay costs of production; but whoever does raise honey to sell, it will be best for *all* to have it stored in salable shape, at good prices. If the convention was 50 miles away, we could leave our business and bees. Won't it prove that we should have a south-western association and local conventions generally?

With best wishes to all brother producers, I subscribe." JAMES HEDDON.

This opened a discussion upon

GLASSED BOXES *vs.* SECTIONAL FRAMES.

Mr. Butler, Jackson, for 2 years past, has raised his honey in sections, and discarded the glass.

Prof. Cook said, many expert apiarists, among them Mr. Betsinger, thought even the sections should be glassed.

Mr. A. H. Russell, Adrian, said he put his honey up in 1, 2, and 3 card boxes. He glassed his boxes before he put them on.

Mr. Butler favored the section plan, for the reason that many consumers would not like to buy a pound of glass and wood with but a small quantity of honey.

Dr. Southard, Kalamazoo, found the section plan the best for that market. There was no glass or wood to sell.

Mr. Van Rensselaer, Ottawa. O., did not favor glassing the honey.

The President said it was a very important point to put on but a portion of the boxes at first, in the spring.

J. W. Benedict, Tecumseh, asked when was the time to put on the boxes?

Dr. Southard said, when the hives were full of bees, and there was honey to gather.

The President expressed himself in favor of the light sections, and he would make them to hold just a pound. He thought the use of separators with the sections advisable.

Mr. Fahenstock, of Toledo, said that he would give an instance of his experience.—He had observed that there was a great deal in the looks of things. He had used both kinds of boxes the same season, and both were equally well-filled. The honey was beautiful, in the wood sections, but all he could get for it in the market was 13 cts.—He took in his glassed boxes and sold every one, before he left the store the first day, readily for 20 cts. per ℔, glass and all.

Mr. Bingham, Abronia, was satisfied that the small boxes would sell better in the cities. He said the nearer one got to penny packages, the better they would suit the city trade.

Dr. Southard, of Kalamazoo, said he used small sections, but put them into a frame of his own invention, and used as many sections as the size of the colony would warrant. He got his box stuff at the honey box factory in Grand Haven. The cost of each section box is about two mills. These sections are 4 inches square and 2 inches wide.

Mr. Butler, Jackson, hived his swarms on full comb and brood, and in 20 minutes after they were hived they were at work in the sections. Of the artificial comb, he used that which was five cells to the inch. He had never used any separator, for he didn't think it necessary.

The next subject was

EXTRACTED HONEY.

Prof. Cook expressed himself strongly in favor of extracted honey. He preferred to sell it, and could make more money by extracting it. He could sell for 12 cents, and make more than he could in the comb at 25 cents. He gave his experience in disposing of it, the cost of putting it up, etc.—He said he would put it up in jelly cups, and the cost would be about 4½ cents. He would not label any honey first-class unless it *was* first-class. They could'nt afford to be dishonest in recommending their wares. They must grade the honey.

Mr. Bingham said the President had spoken of labeling the honey "pure basswood," "pure clover," etc. He tried that once and got notoriety. He had some very nice basswood honey, and had labels printed "pure basswood honey," took a bottle of it to the editor of an Allegan paper, who, after duly testing the same, gave a notice in his next issue that he was in receipt of a very superior article of pure basswood honey, from Mr. Bingham; and the next week, one of the Detroit papers stated that an Allegan genius had succeeded in making honey from basswood.

Mr. Southard, of Kalamazoo, said he was growing more in favor of extracted honey. He found Mason's quart cans the most economical; could fill a quart can and sell it for 55 cents, receiving 15 cents for his honey, and the can was always good.

Mr. Butler, of Jackson, said that more money can be made by extracting, but sales are not so freely made.

Mr. Van Rensselaer favors having an extractor at once. Extracted honey sold more readily than comb honey.

Mr. Bingham, Allegan, thought not more than 10 or 15 per cent. more honey could be got by extracting.

Mr. Everett, Toledo, put his honey in jelly cups, and used a tin cover. It retailed very nicely in Toledo.

Dr. Southard explained the mode of extracting honey.

Prof. Cook said it was not necessary to wait for the bees to cap the honey.

Mr. Thompson, Detroit, explained a cheap extractor of his own manufacture.

Mr. Bingham then read the following essay on "Cheap Honey:"

CHEAP HONEY.

Many have been the reasons assigned for the steady decline in the price of honey.

Mr. Moore says, "the proceedings of the National Society ought to be sown broadcast, especially to small bee-keepers, who have but little honey. They throw their honey on the market for just what they can get, and in that way spoil the market for large producers.

Mr. Heddon thinks that Prof. Cook's course, in the same convention, would be the ruin of all the small bee-keepers; yet Mr. Moore, Prof. Cook, and Mr. Heddon wish to accomplish the same end, namely:—Keep up the price of honey. In the matter of price for honey, no standard can be fixed by the conventions or associations. Bee-keepers may strive to limit productions, monoploize the business and look wise, but that mighty force, known as the "omniverous stomach," will be the important factor, and dictate the price.

The tendency of the honey market has been entirely in the direction of the consumer, and the producers do as others have done in other things having a fancy price,—namely: Shift from one expedient to another, in the vain endeavor to keep up the price.

The plan now having its run, like measles and whooping-cough, is to keep up the price by making the packages smaller.—This plan may succeed; candy has always paid a fine profit in net packages of half ounces each, at the standard price of a cent per stick!

Who is the coming man, to bring forth one cent packages of honey, having tin corners, and glass sides, and richly embossed?

Don't laugh! Nothing is ridiculous, after you become accustomed to it.

In the persuit of that once popular silver dollar, men see something that they covet, but do not want to steal; no, it would not really do to steal,—at least until the way had been oiled over, and texts quoted, opportunities surveyed, and duty, that plastic clay, carefully located.

He that steals my purse, steals trash; but he that filches from me the credit of my penny package steals that which doth not enrich him, but makes me poor indeed.

Mr. Overmayer, of Sandusky county, Ohio, had marketed 10,000 lbs. yearly. He put it up in all kinds of packages, but principally in the gem jars, which he sold for 50 cents. He sold none to grocers, but his neighbors and the people around took all he could make. He said his bees had averaged him a hundred pounds a swarm. From 5 colonies he got 725 lbs. of honey, and increased his colonies to 35. But he had to feed them after the flowing season.

Mr. Butler, of Jackson, claimed that he could not extract honey without injuring more or less of the brood. He would not dare to extract as closely as Mr. Overmayer had said was his practice.

The Secretary had said he had seen Mr. Overmayer extract the honey from a colony owned by a man near Toledo, and the operation was very successful; the cells were entirely exhausted; brood was not disturbed.

President Cook sustained Mr. Overmayer's views, and said he never hurt any brood in extracting. He also believed in feeding. He said he thought there was more in the talk of "foul brood" than in the reality. He didn't think foul brood would result from the use of the extractor.

Mr, Everett, of Toledo, asked if there was not danger of extracting too close from a two-story hive.

Mr. Overmayer said in case of a two-story hive he would extract the upper story first and then change positions.

Mr. Bingham said that in Michigan it would not do at all to throw out the honey as closely as Mr. Overmayer had done.

Mr. Bingham moved that each gentleman present hand in his name, place of residence, number of colonies he had last spring, number of colonies now, honey, box or extracted, raised during the season, and amount it was sold for. The motion was adopted.

COMB FOUNDATION.

The President opened the discussion of this question by a few remarks, and said he used artificial comb foundation with great success. The great trouble with it is that if filled it would "sag," and this objection must be met, and without doubt *would* be met. The remarks made at the National Convention on Novice's Foundation, by Mr. Newman and Mr. King, rather surprised him. He found that bees generally thinned out foundation if too thick.

Mr. Newman, editor of the American Bee Journal, said it was very certain that bees sometimes would *not* thin out the foundation, and if it was too thick it was unpleasant. But sometimes they would, and if the foundation could be thin enough it would be a great improvement. The matter of sagging was an objection. Capt. Hetherington, of New York, was experimenting with it, and had invented a plan for preventing it; he had found it a success so far, and if he continued to find it successful, he would make his plan public, but he was opposed to advocating anything till well tested and found to be absolutely successful.

Mr. Bingham thought there was no necessity for the use of the starters at present. He said drone comb could be easily cleaned by pouring over it water from a sprinkling-pot, and it made the nicest kind of starters.

Mr. Butler said the comb foundations were a perfect success with him. He had used large quantities, some thick and some thin, and thought there was no difference.—He thought a great deal of it for box honey, and never found any trouble in disposing of it, but never used it for brood purposes.

Mr. Bingham was not opposed to comb foundation. He thought it a success.

An essay was then read on Honey Plants, which will appear in the next Journal.

Mr. Thompson, of Detroit, said he had much experience in raising mignonnette.—Feared it would be a failure at first, but when it did start it exceeded his expectations, as a bee plant. It continued to bloom from June 15 'till hard frosts.

Mr. Russell was elected Treasurer of the Society *pro tem.*

"What shall we wear," was the title of a paper by Mrs. L. B. Baker, of Lansing, which was read.

[This will appear in the next American Bee Journal.—Ed.]

Dr. Whiting, East Saginaw, said most bee-keepers were discarding rubber gloves. The danger of being stung on the hands was very slight.

Mr. T. G. Newman, of Chicago, then gave the following address on

MARKETING HONEY.

Mr. President, Ladies and Gentlemen:

To meet with you on this occasion, and unite in the discussion of themes that interest every apiarist is indeed a pleasure,—the more so, because this association is one of the oldest and best on the continent; many names of its members being "household words" in thousands of homes—not only in this country, but also in Europe and Australia, and when, by means of that mighty lever—the printing press—we transmit to a World your "thoughts that breathe and words that burn,"—they echo and re-echo "to Earth's remotest bounds!"

The honey market is a subject that interests every apiarist. In order that honey may be sold readily, it *must be attractive!* Has it never occurred to you to enquire why bolts of muslin are labeled with lithographs of luscious fruit? Or why boxes of fancy toilet articles are adorned with lithographs of enchanting faces with bewitching smiles? Answers to such questions offer us instructive lessons that will pay for the learning! Manufacturers know full well that in order to have their goods sell readily they must be attractive! No matter how good the quality, nor how cheap the price—they must *attract* and *please the eye!*

To-day, Comb Honey is *the preference* for table use, and if we would cater to the public want, we must produce that article in the most attractive shape. This must necessarily be arrived at by growth! We could not jump at once to "the most desirable shape,"—but by steady, forward steps, we hope soon to approximate perfection!

The larger boxes of yore with many combs are rapidly going out of demand, and now it is difficult to dispose of those having more than 2 or 3 combs, at any price.

As if "sniffing from afar" the breezes of public opinion, Mr. Harbison invented the California sectional frame, and placed carloads of honey upon the market in it. These were readily accepted, and but for the following reasons would soon have become general:

1. Though readily divided by grocerymen, it puzzled them to devise means to pack such combs without side protection with other goods, and deliver to their customers without seriously damaging them.

2. In the retail stores, not being protected from dust and dirt, honey in these frames soon became unattractive to consumers.

But again invention comes to the rescue, putting upon the market single-comb frames, so constructed that they may be easily glassed when taken from the hive and packed in a neat and cheaply constructed crate, containing a dozen combs. Such crate and boxes I have here for inspection, with a box of teasel honey.

In a shape similar to this, Capt. Hetherington has this year put up 75 tons of comb honey, and sold it for $30,000.

In a shape similar to this, C. R. Isham sold his crop at 25 cents per ℔.

In this shape N. N. Betsinger sold his crop at handsome figures.

In this shape G. M. Doolittle sold 10 tons of comb honey to Thurber & Co., New York, and was awarded the $50 Gold Medal for "the best honey in the most marketable shape" at the meeting of the National Convention in October.

No product of field or farm varies so much in price as honey; and why? Because the unattractive manner in which some put it upon the market causes it to be classed as a second or third rate article.

A trip through Water street, Chicago, last week revealed the fact that white clover, comb honey was quoted at different stores, all the way from 14 to 22 cents; the price being governed by the style of the packages, and manner of putting up for the market.

In Thurber & Co's. Price List for Dec. 6, 1877, we discovered that comb honey, of the best grade, was quoted at 25 cts. per ℔, in the Prize Box and Crate, while the same honey in 3 comb boxes was quoted at 21 cts. These are facts that need no argument.

The "Prize Box" and "Crate" should be made in manner, form and substance like the sample before us. The box is 6 in. high and 5 in. broad, and when packed in the crate, stands upon its top-bar, for safety in sending to market. The lumber of the box is ⅛ and ¼ in. thick, and is sawed smoothly; with the cover, sides and ends of the crate planed, in order to make it the more attractive.

Heretofore, I fear, we have been "measuring ourselves by ourselves," too much.—We have copied each other in the matter of marketing—instead of enquiring of our wholesalers, our retailers and our consumers what their needs and preferences were. Only in the latter way can we expect to arrive at a correct conclusion.

The demand will doubtless increase a hundred-fold! It only requires to be attractively put up, to find ready sale at good prices. Nearly all the desirable honey is now disposed of,—that which remains unsold is mostly the unattractive. If we can but meet the requirements of consumers, there will be no trouble to sell all the honey that can be produced on this continent.

Dr. Whiting, Saginaw, indorsed what had been said, and remarked that it was his chief object in coming to the convention to see that this point was fully discussed. He had put up his honey in cases, but sold for seventeen cents. When he saw the honey put up in a different case, no better honey than his, and sold for twenty-five cents, he couldn't stand it.

After a quartette by vocal singers, the President announced that at the last meeting a committee to report on

WINTERING BEES.

was appointed, and he expected Mr. Cheeny to be present, but read a letter from him to the effect that he would come if possible, but fearing he could not, he sent a paper he had written upon the subject, which will appear in the next JOURNAL.

Dr. Southard said to winter bees successfully you must have the moisture expelled, and he never succeeded even in a good dry cellar, but that packed in chaff on the summer-stand he has not two per cent. loss.

Mr. Butler said one important point has not been touched. It was the moisture in the hives. He had built a good, dry cellar, and had fair success; but the moving out and back was too much labor. Besides, if moved out the bees would fly out, and having been in the dark, they would come out as soon as they could see light, and many would perish and the hives soon become depopulated. This was the objection to cellar wintering. He had adopted the chaff method for the past six years with perfect success. He hadn't lost two per cent.

Mr. Benedict, from Bennington, O., said he he didn't think of taking special pains to house bees for winter except to save honey,

Mr. Russell, of Adrian, said he wintered his bees in his cellar, and experimented. He left some of the colonies in the cellar all winter. Others he took out in February and gave them a flight. After that they were very troublesome, and he had to keep carrying them out. Some he kept in just six months, and they came out best of all. He would winter a hundred colonies this winter, and would not take out one of them unless obliged to.

Prof. Cook said that he thought no bees should be carried out if they were quiet. He thought the 6th of April as early as pollen could be gathered.

Mr. Whiting said that care should be taken to have the comb warm when put into the cellar, otherwise moisture would gather in the hives. He gave the following rules for wintering bees:

1. A sufficient supply of good ripe honey.
2. Bees enough to cover the frames.
3. Good pure air in proportion to size of swarm, but no draft through the cluster sufficient to chill them.
4. Freedom from condensed moisture.

Mr. Butler said bees should never be left out till the hives became frosted.

Mr. Van Renssalaer, of Ottawa, Ohio, exhibited a model of a bee house, and explained it.

Mr. Bingham instanced a case of "freezing out" this fall. His neighbor, A. S. Weeks, had a colony in a 12x14-inch Quinby hive. It sat near the ground, and in November, when the the thermometer was fifteen degrees above zero, it frose to death. Mr. Weeks was one of the most reliable bee raisers in that section.

Mr. Southard gave his method for preparing boxes for wintering, as did Dr. Whiting. Both used straw and chaff.

Mr. Beal, of Macon, said he lost fifteen swarms, and there was not a dead bee in or about the hive, and plenty of honey, and still they had left for parts unknown.

Mr. Benedict said he examined a case of that kind, and found the honey watery and sour.

Prof. Cook said bees will leave for many causes in the winter, such as loss of queen, sour honey, or any disturbance.

Prof. Cook then read an article on the management of bees at the college, which will duly appear in the JOURNAL.

THURSDAY'S SESSIONS.

The following resolutions were passed unanimously:

Whereas, The All-wise Father has blessed the apiarists of our State and country with health and prosperity for the past year, and

Whereas, The people of Adrian have given us a kindly welcome, and

Whereas, Mr. A. H. Russell has spared no pains to make our meeting successful, and by his efficient labor, helped to make this one of the best meetings of our society, and

Whereas, The Central and Lawrence Hotels have shown their appreciation of our efforts and cause by offering reduced rates to our members, and

Whereas, The Quartette, oy their sweet music, has added to our enjoyment, and

Whereas the Adrian and Madison Grange and Sovereigns of Industry, have kindly granted the use of their hall at very low rates for our deliberations, and

Whereas, The reporters of the Adrian Times and Detroit Free Press have aided in extending the influence and good of our deliberations, and

Whereas, The large delegation from Ohio have by their encouraging presence given valuable thoughts and suggestions during our discussions, and

Whereas, Our absent and able Secretary, whose inability to be with us we very greatly regret, has never spared any pains to make our meetings interesting and instructive, and who has done so much to give our society its proud position, and

Whereas, Mr. T. G. Newman, the genial and very able editor of that firm and "long-tried friend" of not only American, but of European, and even Australian apiarists, and which is ever alert to do us all good, giving our conventions and societies its fullest encouragement (would that it was in the hands of every bee-keeper), has done so much to add to the interest and benefits of this meeting; therefore,

Resolved, That our hearty thanks be tendered to God, the Giver of all Good; to the good people of Adrian, especially to Mr. A. H. Russell, and the proprietors of the Central and Lawrence Hotels, and to Mr. Everies and daughters; to the proprietors of this Hall; to the Adrian Times and Detroit Free Press; to the gentlemen in attendance from our sister State, Ohio; to our absent Secretary, H. A. Burch; and to Mr. T. G. Newman; may he long continue at the head of the American Bee Journal, and that old Bee Journal at the head of apiarian papers the world over.

HOUSE APIARIES.

Dr. Whiting, East Saginaw, did not think much of them; they were breeding places for moth, and their expense would preclude practical apiarists from indulging in them.

Mr. Bingham said Mr. Burch had lost his house apiaries by fire, and he had not rebuilt them. Actions spoke louder than words.

Mr. Thompson, Detroit, had visited Mr. Reno, in Illinois, who had forty colonies in a house apiary, and was entirely satisfied with it.

Mr. Russell had little experience in keeping bees in house apiaries, but did not like them.

Prof. Cook explained a house apiary, and said he contemplated building one at the Agricultural College next season, in order te experiment with the matter, and prevent stealing, from which they had suffered much the past season.

Mr. Bingham said men who had built house apiaries were not anxious to build others, and winter out of doors.

Mr. Russell had lost more bees wintered in his house apiary than in his cellar.

"CREATING A HOME DEMAND FOR HONEY."

was the next topic discussed by Mr. W. L. Porter. [This will appear in our next.—Ed.

Dr. Southard said he found farmers ready to purchase extracted honey, if the packages were worth the money asked for them.

Mr. Benedict had no difficulty in selling all his honey in his immediate neighborhood.

Mr. Newman spoke of creating a demend in Chicago for good honey. One groceryman of his acquaintance had sold upward of 60,000 pounds since September.

Mr. Butler had disposed of 4,000 pounds of comb honey in Jackson this season before Oct.

Mr. Stearns, Adrian, thought consumers would prefer the extracted to the comb honey if they knew they were getting genuine honey. Extracted honey should not be held at higher rates than maple syrup or clear syrup made from white sugar.

Prof. Cook said Mrs. Baker had created a market in Lansing, and she now found it impossible to supply one grocer all he could sell.

The following resolutions were adopted:

Resolved, That we favor increased pains among our apiarists to make all honey attractive before putting it on the market.

Resolved, That we advise our apiarists to encourage the market for extracted honey.

Resolved, That we advise the securing of surplus comb honey, in small sections or frames, with glass over faces.

THE ELECTION OF OFFICERS

resulted as follows:

President—A. B. Cheney, Sparta Center, Kent county.

Vice President—A. H. Russell, Adrian.

Secretary—W. L. Porter, Northville, Oakland county.

Treasurer—Dr. Whiting, East Saginaw.

On invitation of the Treasurer elect, the next semi-annual meeting was ordered for East Saginaw, the second Wednesday and Thursday in April next.

APPARATUS.

Dr. Whiting, chairman of the committee on apparatus, reported the following on exhibition:

Hives, by the following: A. H. Russell, Adrian; John Randall, Lenawee county; J. N. Becker.

Smokers: The Bingham, Quinby, Root, and Van Rensselaer. [The committee decided no to recommend anything—but will say the Bingham smoker suits them best.]

Honey Boxes: The Isham, Doolittle, Hetherington, Russell, and Southard & Ranny.

Crates: The Hetherington Crate, and the Southard & Ranny Rack.

Honey in Boxes: White clover from Miss Lucy H. Wilkins, A. H. Russell, Southard & Ranny; Teasel from T. G. Newman.

There were several models, &c. All of the apparatus were inspected by those present, and added much to the interest of the Convention.

FANCY SYRUPS.

Just before adjourning for dinner, Mr. Bingham requested that one of the topics for discussion immediately after dinner be fancy Syrups, known as Silver Drips, Golden Drips, etc., sold by all grocers, and used largely on pan-cakes. He requested that Mr. Russell furnish for illustration some best Japan tea, and such samples of syrup as he could find at any of the groceries.

Upon assembling, the tea and specimens of syrup were produced. After being mixed, the mixture was shown and compared with the original tea and also with the syrups. The result was simply startling. The light amber tea was turned as black as ink by the silver and golden drips.

Mr. Bingham then explained the cause of the change in color, and stated that it was due to the sulphuric acid contained in the syrups, which were in the main obtained from corn-starch, treated with sulphuric acid, and known as "glucose," sweetened with New Orleans and other grades of molasses or granulated sugar, as might be desired to bring the syrup to a given shade and price. Mr. Bingham stated that this subject had been taken up by the State Board of Health, and the sale and use of said syrups condemned as detrimental to the public health.

In accordance with said decision, the convention requested that a committee of three be appointed to bring the subject before the legislature at its next session, praying that this most pernicious adulteration, so seductive in its form and baneful in its consequences, should receive such condemnation as such an evil demands. The President appointed the committee as follows: T. F. Bingham, Abronia; Dr. L. Whiting, East Saginaw; James Heddon, Dowagiac.

Mr. Butler, of Jackson, read a paper on "What shall we do with our surplus stocks?" This will appear in the next A. B. J.

The Convention adjourned to meet at East Saginaw, April 9 and 10, 1878.

A. Fahnestock, *Sec'y, pro tem.*

[Questions with answers and a statistica table will appear in our next issue.—Ed.]

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OUR LETTER BOX:

Sundry Letters..........54 to 58

☞ Vol. 1, AMERICAN BEE JOURNAL is now out of print. "The Dzierzon Theory," which we have re-published in pamphlet form, now takes its place. It contains much that every bee-keeper ought to know, and is one of the most interesting and instructive little works ever published. Its low price (only 20 cents, post-paid,) places it within the reach of all.

Editor's Table.

☞ Newark, O., reports a case of bees swarming on Christmas day.

☞ An additional cypher made us to say at the Adrian Convention, that we knew a groceryman who had sold since September, nearly 60,000 lbs. of honey. It should have read 6,000 pounds.

☞ L. Lindsly, of Waterloo, La., says that in a poor honey year his Italians are far superior to blacks. Last season was a poor one, and his Italians got only half a crop—his blacks got none.

☞ John Bourgmeyer & Co. have made a new Comb Foundation Machine, which makes sheets 12 inches wide, and can be sold for $40. The foundation is equal to any we have seen, as to quality, and the machine is exceedingly *cheap*, at $40. Others are sold at $100, that make the same size sheets. We can supply them at manufacturer's prices.

☞ The Rev. A. Salisbury has gotten up a neat Honey Basket. It will contain 11 combs, and is made of wire and berry-box material; with 11 one-inch comb-foundation starters, it only weighs 6 oz. Of course, it is intended to be cut into sections, for retailing.—It is 4x6 inches inside, and 17 inches long. It can be made to fit any hive.—For being strong and yet light, it certainly carries off the palm. For retailing in home-markets, it will be quite valuable; and if protected in a crate, will ship as well as California frames.

The Querist.

Buffalo Co., Wis., Dec. 30, 1877.

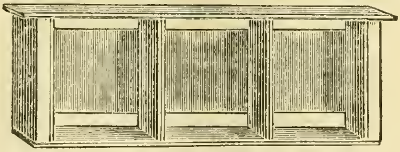
By answering the following through the Bee Journal, you will much oblige a novice: Is the 8, or 10 framed Langstroth hive the best? Are honey boxes, or section frames the best for comb honey? Can either be used on the same hive?

George Cowie.

"How are the Prize Boxes and Crate used? What is best for guide? Should each section be glassed when sent to market?" J. W. Johnson.

[Langstroth hives are used with 8, 10, and 11 frames, according to the fancy of the apiarist. Adam Grimm, and other Wisconsin bee-keepers, preferred 8 frames. For box-honey it is, perhaps, about as good—forcing the bees up into the boxes with their stores, for want of room below. Still we should even prefer the shallow Langstroth frame for this, which is only from 5 to 6 inches in depth. The 10, and 11 frames are more generally in use.

Prize boxes are used as sections, and may be glassed or not, as the trade may demand—and are, no doubt, the best for putting up comb honey. They can be used on any sized hive, by making the case to hold them of proper size, (see cut), or by placing them, like other boxes, just over the frames, on slats, ⅜ inch thick; if any space remains over the frames, cover it with a strip of wood, just to fit.



Case of Prize Boxes for Langstroth Hives.

The boxes are intended for comb foundation starters, but may be used without, as they have separators between each comb, to prevent their being built crooked, (see cut). A quilt is used just the same as over the brood chamber frames.—Ed.]

Clarksville, Jan. 21, 1878.

What are the full dimentions of two-story Langstroth hives?

I have about 100 hives of bees in cellar, all doing finely. A. Snyder.

[These are made of different sizes to suit the notions of those who use them. Ours are made thus, unless otherwise ordered:—14x18⅝ inside, and 10 inches deep; with 4 inch portico. The second story is same as the first, and this is surmounted by either a 2 or 7 inch cap, as desired. The frames are 9⅛x17⅝ inches outside.—Ed.]

"Mr. Hasbrouck praises the Norway maple very highly, for the amount of honey it yields. Is it superior to the many other varieties? How does it compare with Basswood, or the Tulip tree? What other ornamental, or fruit trees would you advise to set out, to improve the prospects of the apiary? Please name in the order of their merit." E. P.

[Norway Maple, *Acer Platanoides*, is good. It is hardy and holds its leaves late, so is fine for ornament. I do not think it any better than our native maples. Our soft and silver-leaf maples are very valuable, they bloom so early and furnish plenty of honey and pollen.

Valuable trees in order: Basswood, Tulip, Soft Maple or Silver Leaf, (very beautiful, often weeping and very gaudy in autumn,) White Willow, Sugar Maple.—A. J. Cook.]

☞ Henry Alley, Wenham, Mass., has sent to our Museum one of his new bee hives. He describes it thus:

"It requires but 22 feet of lumber to make it. It has surplus capacity for 72 lbs. of comb honey, (36 two-pound boxes). The brood frames are the size of the Quinby standard, and can be lifted out of the top, or either side of the hive. It has 2 cases of section boxes; one on each side of the brood frames. The brood chamber can be contracted at pleasure. It has no honey board, nor moth traps, and is not patented. The entrance can also be contracted at will, to let only one bee pass, or enlarged to a space of 1½ inches high, by 12 inches long—affording ample ventilation in hot weather, as well as being useful in hiving a swarm."

It is a simple and cheaply-constructed hive, and also a very *neat* one. Friend Alley adds: "To any one who will send 10 new subscribers to the Bee Journal Office, before April 1st, 1878, I will present one of these hives." Now, who wants to take that offer up?

☞ Being so much crowded with valuable articles, written especially for The Journal, and not wishing to defer them too long—is our only excuse for adding 12 extra pages this month.

☞ Dr. E. Parmly remarks: "I was unfortunate in the use of the word "essay" in my offer. "Best method" would have been more suitable. What is wanted is a method of raising and fertilizing queens, with the use of fewer worker-bees than the present methods—making queens cheaper, and purity of race certain."

☞ The separators Doolittle uses are just like those illustrated on this page. He uses Cases containing 2 and 3 prize boxes, on his different hives. He says, "honey cannot be stored profitably in sections, without them."

Honey Adulteration.

It will be remembered that in the Bee Journal for December, we stated that a grocer of Glasgow, Scotland, had been fined £2, for selling an adulteration, labeled "Genuine American Honey."

In writing to Novice, C. O. Perrine suggested that "the names on the labels attached to the jars should have been given."

In order to ascertain, friend Dadant wrote to the Secretary of the Apiarian Society, in Glasgow, and in reply was informed that the names on the labels of the jars were Thurber & Co., of N. Y., and Bradshaw & Wait, of this city.

Novice, in *Gleanings* for January, says: "American honey is now being sent to London in such large quantities that it would not be strange at all, if counterfeits began to appear."

True; but might not the labels also be counterfeits, as well as the articles thus labeled? We are slow to believe that Thurber & Co. are adulterators. We have on our desk one of their Honey labels, which they put on their Honey for export, which reads as follows:

> "One thousand dollars, in gold coin will be paid, if the honey contained in this jar is found to be impure, or in any manner adulterated."

In noticing this label, in the Journal for December, we remarked: *This* has the "ring" of true metal about it! Adulteration should be everywhere frowned down.

In all candor, we would ask, is it *supposable*, even, that Thurber & Co. would deliberately put up adulterated honey and export it, and then offer a thousand dollars in gold coin to any one who would analyze it? It *may* be so; but we want more proof than we now have, to convince us that they actually did such an un-business-like transaction.

The Scotch letter adds:

> "Mr. Campbell told me that before he was fined, he had sold about 60 jars per week. The produce broker had to take back the remainder. It will be sometime before the trade will be re-established.—The only way would be to send sectional supers over, showing the honey in the comb; but even that, I fancy, can be adulterated by feeding the bees grape sugar."

Friend Dadant then gives his views, as follows:

> "While in St. Louis, recently, he found considerable adulterated honey, selling for 8 cts. per pound. If it was 57 per cent. glucose at 4c., and 43 per cent. honey, at 10c., it would cost only $6.58 per 100 lbs, and could be sold at a profit, at 8c. per lb., in large quantities.
>
> "This adulteration gives dealers the opportunity to undersell honey producers, besides doubling the supply and decreasing the demand on account of its impurity. We should petition to Congress to appoint food inspectors like they have in Europe, whose duty it would be to prosecute all adulterators. Bee-keepers should unite in a vast association, with a few reliable officers who should procure samples of all the syrup, maple sugar and honey, supposed to be adulterated, and to assist in the prosecution of the vendors. Then we shall find it easy to dispose of all the honey produced."

The Apiary.—This is the title of a work on bee culture by Alfred Neighbour, Esq., of London, England. The third edition, "greatly enlarged, revised, and remodeled," is just published, containing 350 pages. We have read it with considerable interest and find much that is interesting. The author says of the Rev. L. L. Langstroth, that he "stands undoubtedly at the present day as the foremost apiarist of the English speaking race," and quotes largely his published views on different subjects. The author acknowledges himself "largely indebted to The American Bee Journal" and "the very able articles by which that remakably well-conducted periodical is distinguished."

The work is illustrated and elegantly printed. 100 pages are devoted to the nature, habits and management of the Honey Bee, and the balance to illustrated descriptions of Geo. Neighbour & Sons' hives and other apparatus for the apiary, which they keep for sale to English apiarists. We have ordered some of these books and shall be able to supply them at $1.50 postage paid.

☞ The *Bee-keeper's Magazine* for Jan. came to hand Jan. 12. Speaking of D. D. Palmer's visit to New York, the Editor says:

> "He (D. D. Palmer) said he had examined carefully all the prominent styles of surplus honey boxes, (the so-called Betsinger included,) but said none of them would compare favorably with the style used in our Eclectic hive, which style he is going to adopt."

There must be some mistake about this, for since friend Palmer went home, we have received a letter from him and he has ordered "15,000 of the Prize Boxes, and 1,000 of the Prize Crates." Hence it is settled now that he does not intend to adopt any other than the Prize Box and Crate.

☞ By request we have gotten up a blank for a Petition to Congress to have the Postal Laws amended so as to admit of Queens being sent in the Mails, as heretofore. Anyone can have them on application at this office. Get them signed and returned to us by March 1st. We will then see that they are properly presented to Congress, and by a united effort try to have our voice heard. We ought to have 100,000 signatures before March 1st.

Migratory System of Bee-keeping.

A letter from one of our subscribers in Louisiana informs us that he intends to make a "new departure" in the management of his apiary. When, in the natural course of events, the early bloom of that locality is nearly exhausted, he intends to place one thousand colonies of bees on a barge on the Mississippi River, and by means of a small steam tug boat, follow the bloom up the river, and thus procure perpetual honey-gathering. However *new* this migratory system of bee-keeping may be for this country, in the history of the World it is *no* new thing. In proof of this, we will submit some interesting statements from an English work on apiculture.

In many countries, the removal of the hives from one pasturage to another is considered as a very important branch in the practical management of the apiary. Savary, in his "Letters on Egypt," enters into a long detail of the manner in which the inhabitants of that country transport their hives along the banks of the Nile, and says:

"The Egyptians exhibit great skill in their manner of cultivating the bee, as the flowers and the harvest are much earlier in Upper Egypt than in Lower, and the inhabitants profit by this circumstance in regard to their bees. They collect the hives of different villages on large barks, and every proprietor attaches a particular mark to his hives; when the boat is loaded, the conductors descend the river slowly, stopping at all the places where they can find pasturage for the bees. After having thus spent three months on the Nile, the hives are returned to the proprietor, and after deducting a small sum due to the boatman for having conducted his hives from one end of Egypt to the other, he finds himself on a sudden enriched with a quantity of honey and wax, which is immediately sent to the market. This species of industry procures for the Egyptians an abundance of wax and honey, and enables them to export a considerable quantity to foreign countries."

M. Maillet, in his "History of Egypt," also makes mention of this custom relative to the pasture of the bees.

It is the custom of the modern Greeks, who inhabit the coast of Asia Minor, toward the islands of Archipelago, to transport their hives by sea, in order to procure an abundance of food for their bees. A similar practice is also adopted in China; but "the celestials," of all people in the world, are the most ignorant in the management of the bee. Of its natural history, they know less than the savages of Africa; they consider themselves very wise in knowing that the bees make honey and wax, but as to any further research into their history, it is beneath the notice of such celestial beings.

A very ingenious method is practiced by the people who inhabit the banks of the Po, in regard to the transportation of their hives. They load the boats according to the manner of the Egyptians, and then transport the hives to the vicinity of the mountains of Piedmont. On their departure, a line is marked out around the boat, from which a scale is drawn, and as the bees collect the honey, the boat sinks deeper into the water; thus, by looking at the scale, the boatmen know when the bees have gathered a sufficiency of honey, and they then prepare for their return.

Alexandre de Montfort relates, that the people in the vicinity of Juliers generally convey their hives to the foot of the mountains when the wild thyme is in flower.

M. Valmont de Bomare, in his Dictionary, observes: "Great is the advantage of being in the vicinity of a navigable river, for by these means, the spring of a dry country can be united with the autumn of a fertile and umbrageous one, and thereby ample amends be made for the poverty of the country in which the apiarist may be established.

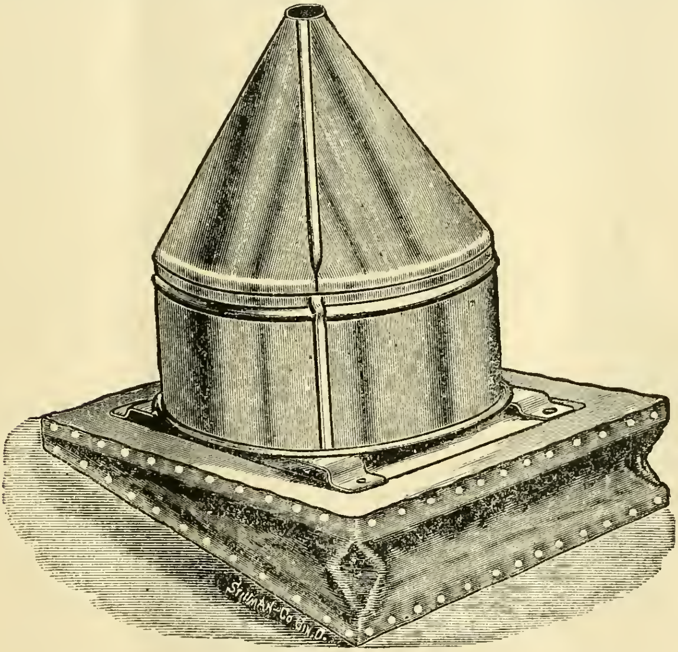
M. l'Abbe Tessier, Prontant, and others, inform us, that the proprietors of the bees in La Beauce transport their hives every year in the month of August, in carts, into the country of the Gatinois, or to the environs of the forest of Orleans, about the distance of 10 miles from their habitation.—They find heath or buckwheat in flower at a time when in La Beauce, after the gathering of the sainfoin and the vetches, no further addition can be made by the bees to their winter store.

This manner of transporting the bees is called, in the country, *leading them to pasture.* A single cart contains thirty or forty hives. They travel only during the night, and at a foot-pace, and as much as possible on sandy roads. The hives are covered with linen, and are arranged in stories; those of the upper being reversed between those of the lower story. They remain about two months in the place of their pasturage. The peasants take care of them for a very trifling salary. In this season nearly 3,000 strong hives are seen at a little village.

When the hives are to be transported, they are placed in the evening on a linen cloth, in which they are wrapped, and tied round with bands of straw, osier, or packthread. Two men can carry several hives by passing a long stick through the knot of the cloth which covers them. They are thus often packed on horses or mules. If they be placed in the common way, that is, on their bottom, they must be raised and sustained at the height of some inches, especially if the journey be of some length; for it is necessary that the bees should be able to imbibe a renovated air. The swarms which have been newly hived may remain in this state 2 or 3 days. In cold weather, the hives, full of wax, honey and bees, may be transported to any distance, by taking care only that the combs do not break one against the other; for this purpose they are supported with little sticks.

To these details of M. l'Abbe Tessier, we will add some not less interesting, extracted from the Dictionary of M. Bomare: "The skillful economists in the Gatinois, after the crop of sainfoin, transport their hives into the plains of La Beauce, where the melilot abounds; afterward into Sologne, where the country is covered with buckwheat, which is in flower until the end of September. The practice is universal in the country, and even the humble peasant imitates the opulent proprietor in the transportation of his hives.”

M. Bomare adds: “We are informed, by a memoir of M. Duhamel, that the profit which is extracted from the bees under the system of transportation, is very considerable. From the month of July, when the bees have swarmed, and have made an excellent harvest from the sainfoin, the whole of the honey and wax is taken from them, and the bees are put into an empty hive. The hives are then transported into a country where an abundance of flowers and mellifluous herbs are to be found. If the weather be fine, and the flowers luxurient, the hives, which have been transported in July, are well filled by the latter end of August. They are then changed a second time, and particular care taken of the brood combs. As soon as the bees have been thus changed a second time, they are removed into a country where buckwheat abounds; and supposing the season to be favorable, the hives are so well filled that a third of their combs may be extracted.”



NOVICE'S SMOKER.

☞ The Lakefield, Ont., *News* says “Mr. W. H. Langford chopped down a maple tree which contained the hard-earned hoardings of a colony of bees. Getting 150 ℔ of honey.”

Bellows Bee Smokers.

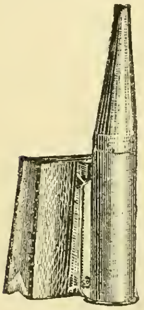
Since the invention of the extractor by Hruska, no more important contribution to practical bee-culture has been made than the Bellows Smoker.

The late Mr. Quinby was the first to make such an article, and it was accorded the whole field during the life of the distinguished inventor. Though it did not prove to be so perfect that no improvements were needed, it is well known that so long as no substantial improvement was suggested by others, no bee-keeper presumed to copy it, or deprive him of the honor, or small profit which may be derived from its manufacture.

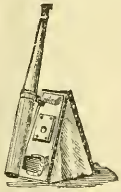
Mr. T. F. Bingham was the next in the field with a smoker. His is *not* a copy of the Quinby; it is original in both construction and design. Mr. Bingham has filed a caveat preparatory to obtaining a patent to protect his rights in it as its inventor. Notwithstanding this A. J. King has produced an imitation of it, and A. I. Root has copied many of its important features in a low-priced imitation of it.

As an independent JOURNAL, having no "axe to grind" nor "hobby to serve," we would ask, in all candor, is this doing justice to the bee-keeping fraternity in general, leaving the rights of the inventors out of the question entirely? Is it not the encouragement that we as a "class" hold out to inventors, that is lying at the root of *all* improvements? Should we not encourage and sustain the *real* inventor of a principle instead of the mere copyist who may manufacture a cheap imitation? It really appears to us that Quinby and Bingham have some rights that should be respected.

In saying that the Bingham Smoker is original both in construction and design, we mean that it is so more especially in its internal arrangements.



BINGHAM'S SMOKER.



QUINBY'S SMOKER.

All can see that the upright bellows and tube somewhat resemble the one invented by the late Mr. Quinby, but in no other respect, we believe, are they similar.

But we started to notice the new smoker made by Novice, a cut of which may be seen in connection with this article. All will see at a glance, its form and shape; the bellows being exactly the same as the Bingham smoker. The short and thick tube is not as convenient, we think, as the tube of the latter. The fire-pot being fastened to the bellows by screws, the heads of which are exposed to the fire, the heat will extend to their tips and cause them to loosen from the wood of the bellows, and soon there will be a division of parts. Having to lay it down on the flat of the bellows is also an objection; it cannot be as readily picked up, and will not be kept in such good order as one that is put down on the edges of the bellows and the end of the tube. Having to suck the air in at the same place where it is discharged, (there being no valve) the volume and power are lessened, and there is danger of sucking the ashes and fire into the bellows from the fire box.

Seeing this difficulty, Novice has attached a little slide to operate as a cut-off between the fire-box and the bellows; but the fire-box being so large at the base, and its being so near the bellows this cut-off will not be of much service.

It is perfectly *natural* to hold the bellows by the left hand in a horizontal position, ready to puff the smoke at pleasure, leaving the right hand free to manipulate—but with Novice's smoker this *natural* position and operation is out of the question.

Novice has named the article "The Smoker I prefer,"—but for these and many other reasons we say—candidly but kindly—It is *not* the smoker *we* prefer.

He also intimates that it can be used to for subduing stubborn children, but we do not see in what way. It can't be possible that he would be so cruel as to blow the smoke into their eyes! We are sorry he has not given the *modus operandi*. It would have been such a relief to tender-hearted, loving parents.

The "King" imitations of the Quinby and Bingham smokers are of similar construction to the originals, but very inferior to them in many particulars.

Is it not "mete and right and our bounden duty" to render "honor to whom honor is due," and deal out justice alike to all? It is with the kindest feelings to *all* that we criticise—and did we not deem it a *duty* to our readers we should have written little or nothing on the subject.

LATER.

The foregoing article has been crowded out several months, by long Convention reports.

Now we have to announce that the Bingham Smoker has been patented.

This step was taken because of the "King" and "Novice" imitations of it, and was done solely to protect the rights of the inventor. We should have preferred that this invention might *not* have been covered by a patent—but the unwise course pursued by A. I. Root and A. J. King, in copying or manufacturing every desirable article without so much as saying to the real inventors, "By your leave," must be held responsible for such action.

Those who *use* an infringment of a patented article, are liable to the law as well as the manufacturer and the vendor of such articles. All should therefore be careful, and not "burn their fingers" by *purchasing* or *using* an infringment. Better to throw them into the fire than get into trouble about such a small matter.

Whatever may be thought or said of patents, and the rights of inventors, we are compelled to say, that property in invention and copyright is recognized in the laws of every civilized nation. Mr. Bingham is now the only legal manufacturer of the "direct draft" improvement in Smokers, and such a valuable apparatus for the easy and safe management of bees may be justly regarded as a land-mark in apicultural progress.

☞ We regret to learn that Dr. W. B. Rush, of New Orleans, La., met with a serious accident, in a sugar mill, on Dec. 8., which entailed over a month of intense suffering. He started to visit his father in Penn., on the 25th of Dec., but was unable to proceed further than Granville, O. He is slowly recovering, and expects to return home, as soon as possible to attend to his apiary.

The A. B. C. of Bee Culture is the title of a pamphlet of 52 pages by A. I. Root, of Medina, O. Price 25 cents. This is a "Cyclopedia of everything pertaining to the care of the Honey Bee," so far as the three first letters of the alphabet will carry it. We believe it to be Novice's intention to "continue to the end" —and when he arrives at Z, to be able to verify the "everything" in the title. It is a very useful work and has already exhausted the first edition. It can be obtained at this office.

☞ The manner in which The American Bee Journal begins its fifteenth year of publication is exceedingly gratifying. Scores of letters, by every mail, come laden with words of congratulation and substantial evidences of appreciation, in the shape of subscriptions that are *new* as well as *renewed*. It seems to be well understood that The American Bee Journal is devoting its energies to the interests of producers, and to this end it provides in its monthly "budget" the best and most varied information on all subjects of interest to the Apiarist. It is gratifying to us to notice that those who have for years been prominent apiarists are still its friends and constant readers, and often speak of its sterling worth in almost flattering terms. To all, we wish to extend our thanks for both kind words and deeds.

☞ J. H. Shimer, of Hillsboro, Ills., reports that he had a swarm come out Friday before Christmas, and that it appears to be in good shape. For a northern climate such things are indeed a rare occurrence—but the mild weather of December in this latitude was just like spring.

☞ In California, it is reported that they are having the "early rain," with a good prospect that "the latter rain" will not be withheld. But the drouth of last year killed more than one-third of all the bees there. Half a crop of honey is all that California bee-men hope for, under the circumstances, and that will not more than supply their home demand—last year's failure having cleaned out the home markets.

More Tinkering.—A recent "ruling" of the Postal Department has excluded knives, scissors, &c., from the mails, and hence we can no longer send "Honey Knives" or "Scissors for clipping Queen's wings" by mail. They can be sent with other things by express. We shall keep them as usual.

In many provinces of France and Switzerland St. Valentine's day is regarded as the patron-day of bee-culturists. It is celebrated by banquets.

Death of Dr. Jared P. Kirtland.

Another of the "shining lights" of the last decade has passed away. One by one the pioneers give place to their successors in apicultural science, who though none the less enthusiastic than "the fathers," in scientific explorations and energy are "not a whit behind" them.

The following speaks for itself:

EDITOR JOURNAL:—The death of this eminent man needs a notice in the columns of THE BEE JOURNAL. We find the following resolutions passed, at a recent meeting of the Farmers' Club, of the American Institute:

"*Resolved*, that we have heard, with profound regret, of the death of Dr. Jared P. Kirtland, of Cleveland, O. Our eminent naturalist, especially distinguished for his investigations in the orchard, vineyard and garden, whose contributions to science have been recognized in both this country and Europe, and who was a noble man in all the relations of life."

We will add to the above list—the apiary. For more than a half century, Mr. Kirtland has taken a lively interest in bees, keeping them more for pleasure than profit; and while following his professien, he always found time to "doctor" his bees, always quick to note improvements and adopt them. He quickly recognized the frame hive and its merits, and the Italian bee gave him great pleasure. N. CAMERON.

Lawrence, Kansas.

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☞ Friend Oldt has sent us a model of his improved hiving apparatus. He is very fair in his terms. He now makes the following offer:

"On the receipt of $1.50, I will send by mail free, to any address, a model (made of black walnut) of my Hiving Apparatus.—Examine it; if it does not come up to your expectation, return it in good order, inside of two months, and your money will be returned."

This will give those who wish to test the apparatus before buying, a chance to do so.

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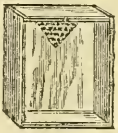
CHINESE MUSTARD AS A HONEY PLANT.—Perhaps one of the very best honey producing plants is tall Chinese mustard. It remains in blossom a very long time, seems to yield honey continuously, is equally vigorous to resist drought, or wet, and flourishes in all soils. It may be sowed any time from May 1st to middle of June—the earlier the better. It will seed itself—its greatest drawback; yet, it is far less troublesome as a weed than common mustard.—It should be planted in drills, a foot apart, for ease of cultivation. An ounce will plant a space of one rod by four.

We can only fill a few orders for this seed. Price, per ounce, 20c.; quarter pound, 75c., postpaid.

Marketing Honey.

This department will be devoted to items of interest concerning Packing, Selling and Shipping Honey and Beeswax.

"The Betsinger Prize Box."



Friend Betsinger, being annoyed because the box containing the honey to which was awarded the Gold Medal, in New York, has been called the Doolittle box, desires us to publish the following:

"I desire you to call it the Betsinger Prize Box, in large print, above the comments I desire you to make, and to inform the many readers of the AMERICAN BEE JOURNAL that I am the inventor of said box, and wherever it is mentioned, my name may appear before it, just as the first frame hive is called the Langstroth Hive.

"This box is held in cases, containing two or more boxes, with wood or tin separators. It is not patented, and is free to all, to make and use, providing it is called by my name. Glass is 5x6 in., one-sixteenth less in width—each glass is fastened by two tin points. N. N. BETSINGER."

Of course THE AMERICAN BEE JOURNAL wants that every man should have his due —"Honor to whom honor," etc., and it would not for the world, even, countenance a robbery of that honor. So we will here give a few facts from history.

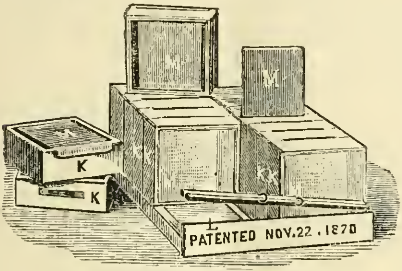
In the *Family, Farm and Garden*, a work published by E. G. Storke, of Auburn, N. Y., in 1860, on pages 305 to 307, is an illustrated description of section boxes, in frames, without separators. Used on both sides of the brood chamber as well as on top. This arrangement was patented by E. W. Phelps, April 6, 1852 and Nov. 9, 1858.

In answer to the query in our last JOURNAL on page 5, Messrs. Barker & Dicer say:

"We made our first section box (as we now use them) in the spring of 1872. Our patent was granted Jan. 7, 1873, and covers all sectional boxes made with two wide and two narrow pieces, so arranged that they form openings between each section. We made sectional boxes several years before that, but considered them imperfect till we invented those covered by our patent in 1873."

We have the original patent papers on our desk and find it precisely as stated by friends Barker & Dicer.

In a "Circular and Bee-keepers' Guide," issued by Geo. T. Wheeler, Mexico N. Y., the inventor of the "Farmers' Friend Bee Hive," patented Nov. 22, 1870, we find a similar arrangement of honey boxes, illustrated and described. These boxes are 5x6, and identical with the one described by the cut at the head of this article, and held in a frame, as seen by the following cut:



G. T. WHEELER'S SECTIONAL BOXES.

Friend Wheeler remarks, that his "arrangement of small honey boxes is the result of many years' experimenting, to combine the advantages of both large and small boxes." On page 8, of this circular, we find a testimonial from G. M. Doolittle, which says he purchased a case of 14 boxes, in July, 1872, of Mr. Wheeler, and therein he ventured the prophecy that they would "come into general use."

Friend Wheeler says he does not claim to be the inventor of section boxes, but he does claim to be the first to combine section or one-comb boxes and tin separators in a practical way, to secure the combs being built true, so that they can be marketed.—For this arrangement, a patent was granted him, Nov. 22, 1870. He commenced his experiments with wood, paper and tin for separators, in 1867.

Friend Wheeler says that all are free to make and use these boxes—all he wants is "the credit placed where it belongs."

It seems therefore to be certain that friend Betsinger has company in his claim to be the inventor of sectional boxes. We are glad that such boxes were invented and would accord *all* honor to every one of the inventors. But as friend Betsinger commenced bee-keeping (as we see by back volumes of the A. B. J.) in 1868, he is anti-dated many years by E. W. Phelps, whose patent on sectional boxes is dated in 1852.

To accommodate all, we should call this Box: "The Phelps-Wheeler-Betsinger-Barker & Dicer Sectional Box." But, for short, we will call it THE PRIZE BOX—and that will accomodate all.

As improvements are in order, and as recently, some consumers are manifesting disapproval of there being so much glass to pay for as honey—let us suggest that the crate be glassed, instead of the boxes. It will only take two pieces of glass, 6x16½ to glass each crate, instead ot 24 pieces, 5x6 inches, to glass the boxes. Prize Crates, ready to nail, are made both ways, either to admit the glass in the crate, or in the boxes as desired. So in ordering, please say which kind are wanted.

* * *

H. A. Anderson, of Jefferson Co., Wis., says: "A convenient crate and a safe one too, may be made in the usual way, with wire springs for the bottom, and at a small cost. One double spring in the shape of an ∽ on each end of the box is enough."

* * *

☞ Friend Muth suggests that but few understand how to put their honey in the most marketable shape, and adds: "The best I obtained during the past season was from friend Hetherington, of Michigan.—Our California friends understand how to put it up for sale—all but their frames."—True; but apiarists are now getting awake to their own interest enough to learn "how to do it." The adoption, quite generally, of the Prize Box and Crate will help the matter vastly.

* * *

Henry Co., Iowa, Jan. 5, 1878.

"Please inform me in THE JOURNAL how much Hoge's Carrier costs and what kind of boxes can be shipped in it?"

H. M. NOBLE.

[Hoge's Honey Carrier is made of different sizes, to accomodate the kind of boxes or crate used; but the regular size for a dozen Prize Boxes in the Prize Crate, costs, with an empty Crate and 12 empty 2℔ boxes, $2. We can fill orders for it.—ED.]

* * *

GLUCOSE is certainly not a wholesome article; and it is used for adulteration only, because it is the *cheapest* sweet.—Candy makers, confectioners, brewers, whisky compounders, and others, use it in abundance, though none will admit the fact. Some time ago, an agent held up a bottle of very clear glucose between his thumb and forefinger, and said to me: "If you are a manufacturer of maple syrup, or a dealer in honey, you will have to use this, and it is just as pure as your honey." The German government put a heavy fine on the use of glucose in the brewing business, as it is injurious to health. I remember, also, to have read in one of our German bee papers, that a bee-keeper ruined a large apiary by feeding glucose, and warned his friends of the ruinous effects of glucose on the life of bees.
C. F. MUTH.

The Gold Medal Honey.

In the Report of the National Convention, E. D. Clark, of Randallsville, N. Y., is made to say "that he had 300 colonies of bees, but not one Italian." He wishes this corrected. He has but one hundred, (75 being Italians and 25 blacks). At that time it appeared to the Secretary that he was talking in favor of the blacks, and ended his remarks by saying he wanted to know which race of bees had gathered the honey that obtained the Gold Medal.

This question N. N. Betsinger answered promptly by saying "It was gathered by the blacks."

As this would naturally lead to the belief that G. M. Doolittle had black bees, he stated in the AMERICAN BEE JOURNAL for December, 1877, on page 422, that he "had not had a colony of black bees for five years."

It now appears that friend Betsinger's remark was based upon the idea that one of the crates on exhibition as friend Doolittle's, was not of his production, but that of one of his neighbors, which was shipped to New York with his crop. This, Mr. Betsinger claimes, he discovered by a particular mark on the crate.

One of the crates of honey, that Mr. Doolittle prepared and sent to New York for exhibition, was stolen from the cars in transit; and by his request, Messrs Thurber & Co. selected another from the lot they purchased of him and placed on exhibition in its place. As Mr. Doolittle was not at the Convention, and was not sure that a mistake might not have been made in selecting a new crate, he expressed his willingness to have the Judges re-consider the award. This they have done, and we here give the result of the

RE-CONSIDERATION OF THE JUDGES.

We, the judges, who awarded the Thurber Gold Medal to G. M. Doolittle, Oct. 17, 1877, being requested to review our decision, make the following statements:

1. We are informed that one of the cases of honey prepared for competition, by Mr. Doolittle, for this medal, was stolen from the cars in *transit*, and paid for by the Railroad company. The other case was a "fancy" one, gotten up expressly for exhibition by Mr. Doolittle.

2. At Mr. D's. request, H. K. & F. B. Thurber & Co. selected a crate from the lot sold to them to supply this deficiency,

3. As Mr. D. bought some of the honey sold to Messrs. Thurber & Co., of his neighbors, to ship with his own, (as is often done, to make "bulk" or car-load). It is claimed that the case of honey, selected by them, was not raised by Mr. Doolittle, but one of the lot he purchased.

4. The Judges, in considering the award for "the best honey," were not confined to any one crate of an exhibit—but considered the boxes of honey put into the fancy crate by Mr. D. as excelling all others exhibited.

5. The Judges, therefore, after a careful consideration of the matter, hereby confirm their previous decision of award.

WM. FLETCHER,
THOMAS G. NEWMAN, } Judges.
A. J. KING,

Of course, there should be *no feeling* on the matter. *All* could not get the Medal.—*Some* must be disappointed!

As one of the Judges, we were in favor of awarding the Medal to another exhibit; but we have, long since, learned to acquiesce in the decision of the majority—and therefore, heartily join in the above decision of the Judges.

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☞ English merchants, last year, ordered considerable California honey in Harbison frames. This year, they ordered single-comb glassed boxes; but many, not filled out, were broken down on the way, and they have now shut down on such orders, because they cannot stand the "breakage." A good and cheap carrier is the remedy—now let Yankee ingenuity go to work.

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☞ We keep Prize Boxes and Crates in stock at this office, and can supply orders, without delay, lower than the lumber for a small quantity can be bought for, in the country. Read prices on the second page of the cover.

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☞ In shipping box-honey, F. C. Hazen advises the placing of a sheet of paper between, and on top of the boxes—so that if any were injured in transit, the honey may not drip over all the rest.

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☞ Adulteration is the order of the day. Honey is, no doubt, occasionally adulterated—but for systematic and presistent adulteration, let golden and silver drips, and fancy syrups generally be awarded the medal. Let any one who desires the proof of this, just take a tablespoonful of any of these syrups, and stir them into an equal quantity of liquid Japan tea, and they will be surprised to see how soon the light amber tea turns as black as ink! They are manufactured from corn starch, treated with sulphuric acid, and sweetened with common molasses.

Boston.

The settled aversion of Bostonians to all kinds of dark honey, has long been known to those producers and dealers who have marketed honey there. While they willingly pay the highest prices for a fancy white article, they cannot be induced to buy, taste, or handle the dark grades. We know a producer, who took 8000 pounds of honey to that market, this year. 5000 was light and 3000 dark. He sold out the light to first-class advantage; the dark dragged. He intrusted its sale to a commission house, and went home. After several months, he learned that no progress was being made with its sale, and the lot was transferred to another commission house, in Boston; and they had no luck in disposing of it when it was sent to New York, and at forced sale, brought from 8 to 10 cts. per pound. We advise our readers to never send dark honey to Boston.

Mr. David Geer, a regular "down easter," and the pioneer honey peddler of the United States, is located there. He is about seventy years of age, and is reputed to be worth over $100.000. He has made his entire fortune by peddling honey, all through the New England states, not unfrequently having 8 to 10 wagons on the road.

The Walker Brothers, of Green Point, L. I.; J. H. Dunham, and P. H. Lislie, of Brooklyn; and the Raymond boys, of Summerville, Mass. (now staid and reliable dealers) all worked for Mr. Geer, and as they developed, they "folded their tents, like the Arabs, and silently stole away."

Mr. S. J. Geer, of Medford, Mass., also a wealthy and reliable dealer, is a brother of Mr. David Geer. A remarkable peculiarity of these two brothers and their *wives* is, they are all so hard of hearing that they can hardly hear each other talk.

Honey is selling, in Boston, at from 15 to 20 cts. for light, and 8 to 10 cts. for dark; no demand for "strained."

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☞ Valentine & Co., the celebrated varnish men, of N. Y., refine large quantities of American beeswax, which they sell through the Liverpool branch of their extensive establishment. This firm handles from 5,000 to 6,000 pounds of beeswax per month, and their brands have a world-wide reputation for purity.

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☞ A patent has recently been issued to M. Laflin, of Chicago, for a mixture of composition of paraffine and resin, for lining, or coating barrels and firkins.

☞ While we are shipping honey to England, that country is selling it to her colonies and to other countries. If England can afford to buy of us for her own consumption, we certainly ought to be able to compete with her for the trade which she is monopolizing from other countries. The Paris Exposition will last six months; giving an excellent opportunity, as well as ample time for all countries to become acquainted with the superior quality of American honey. As yet, we have heard of but one exhibitor of honey from the U. S., (H. K. & F. B. Thurber & Co.), and there can be little doubt but that it will increase their trade four-fold, and open up a valuable and permanent business with many new markets.

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☞ In Peter's Museum, N. Y., at the Academy of Sciences, is the effigy of Peter, the Great, in *beeswax*, habited in a court dress, that was worn by him, and shoes made by his own hands. The wig is from his own, dark hair, clipped after death.—His eyes were black and his stature about six feet, three inches, according to a rod shown, which is said to have been exactly his height.

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☞ A medal, a leather one, would be appropriate—should be offered for honey stored in the most *unmarketable* shape, and crated in the most *inconvenient* manner, to be exhibited by dealers, at the next National Convention—each exhibit to be plainly labeled with producer's name and address. It might have a good effect.

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☞ W. H. Bowdlear, of Milk St., Boston, a beeswax refiner, recently failed; liabilities, $26.000; assets, $5.000. Among other creditors, were Thayer & Judd, manufacturers of paraffine wax.

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☞ It is estimated that the people of the United States consume one dollar's worth of sugar each, yearly.

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LACK of success in the culture of bees, comes more from ignorance, than from any other cause."—*Hamet.*

◆

"The Sweet By and By," when the honey is passed two or three times to the boarders on the opposite side of the table before *you* can get it.

◆

The bees cell the honey, and the dealers sell it.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

For the American Bee Journal.

Notes from Georgia.

FRIEND ANDREWS:—The weather is warm, and bees are carrying in pollen; I examined several colonies and found brood in all stages. Seeing bees come and go from the hive, with that familiar hum, we are lead to judge that they think spring has come in good earnest.

ITALIANS VS. BLACK BEES.

The Italians are carrying in pollen quite freely, when scarcely a black bee is seen with a pellet on his legs. "Well, what of it?" Why, in the spring when honey comes, it will result in at least two weeks time in favor of Italians.

HONEY MARKET.

We are pleased to see that the honey market keeps in advance of what many expected; this, perhaps, may be attributed largely to Messrs. Thurber & Co., who have taken hold of this "luxury," and are not only selling to people of moderate means, thereby placing it beside butter, cheese, and other delicacies, but are shipping it to all parts of the world, by the ton. With these facts in view, it will stimulate bee-keepers of this country to apply themselves to the work, and see that the little busy bees are well cared for.

Bee-keeping is destined to develop a source of untold wealth to this country, and we hope the time will come when they will be kept in sufficient nembers to gather the millions of tons of honey annually wasted.

ITALIAN BEES.

Very much has been said, not only by American bee-keepers, but by the Germans, as to what constitutes the true markings and color of the Italian honey bee. Some of these opinions need pruning pretty closely, as they vary about as much as the weather.

A. F. MOON.

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☞ In my article on Grape Sugar, instead of "put the water in a copper kettle, *on* a wooden tank," etc., read "*or* a wooden tank." This makes a great difference.—As soon as I get a good chance to work at it, I intend to make up a batch of glucose, and try it.

I have ordered honey boxes for 1,000 lbs. of honey, and 200 section frames, or cases, for next season, so you see I mean business. I will double the number of colonies I have, and raise everything for box honey, and will raise a few queens to Italianize in time.

S. C. DODGE.

[We wish you abundant success, friend Dodge. If you will raise a crop of box honey, you will have no difficulty in finding a ready market with friend Muth, at Cincinnatti. We are now having about 200 hives, and a large number of section boxes made up. We expect to raise box honey exclusively, the coming season; and to be sure that we would have it in suitable market shape, we sent to friend Muth for a sample of his sections. He kindly sent us one of his two-story Langstroth hives, with full complement of frames, sections, etc., making us a present of the same, and *even* prepaid freight. As a matter of course, he has our warmest thanks.—W. J. A.]

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For the American Bee Journal.

Transferring Bees.

Our method of transferring bees from the the box hive to that of the movable frame is both simple and easy; we have practiced it successfully for several years.

Every bee-keeper should have in his apiary a pan made of sheet-iron, 4 inches deep, 4 inches wide and from 16 to 20 inches long; the length of the pan should correspond with the length of the frame used.—The pan should have rings in each end for handling; the cost of such a pan is 25 cts., and with care, it will last a lifetime.

WAX FOR FASTENING THE COMBS

is made as follows: To 1 lb. of common English resin, add ⅛ of a pound of beeswax; be sure to get the preparation as above described; if too much wax is used, the weight of honey, together with the heat of the bees will cause it to drop down.

When the wax is prepared as above, neither bees nor moth will effect it. This preparation we use for comb foundation, and never knew one to become loose.

Melt the resin and wax in the pan, over a slow fire; be sure that it does not get too hot, or it will melt the combs when dipped into it; it just needs melting. Prepare a table, or a large box with tight cover, to put the bees upon while transferring; have a wide board or plank, to lay the combs upon when taken from the old hive. You should have a bee smoker, but if you have none, make a good roll of cotton rags, and puff a little smoke in the entrance of the hive you wish to transfer. Raise up the edge of the hive, and smoke until the bees buzz quite lively; this is a sign of their surrender.—The time to conquer them generally takes less than a minute; bees rich in stores take a little more smoke than a swarm with but little honey. As soon as the bees are under control, take the hive to the table and turn it bottom upwards; with a saw, or long knife loosen the combs on two sides of the old hive, saw off the sticks, if any—leaving the combs standing in the old hive, with the ends to your work; this will give you a chance to blow a little smoke on them occasionly, causing them to retreat. Take off two sides of the hive, by cutting the nails with an old chisel; if a chisel is not handy, split them off with an ax, leaving two sides standing. The bees will soon cluster upon the outside. Should any remain on the combs, blow a little more smoke on them. The operator wants a turkey or goose-quil, to brush what few bees stick to the combs; with a sharp knife commence on one side, cut the combs as close to the hive as possible. As fast as you cut out the comb, brush off adhering bees, and carefully lay them on the board prepared for them; remove all the combs from the old hive as soon as possible, as robber bees are apt to wish a share in the feast. It is well to have a table-spread, to keep the combs covered up. The robbers often trouble so much as to make it necessary to take the bees into a building until the combs are in a new hive. Having cut out all the combs and laid on a board, take a frame from the hive you are putting them in, and carefully lay it on the comb and cut to fit the frame. Keep it the same side up, as in the old hive, if convenient; if not, no harm. Go through with all the combs, fitting them to the new frame. Save every piece and fasten into the frame. Soon as all the combs are fitted to the frames, have wax ready, (not too hot), gently dip the edges of the combs into the wax; (it must be done quickly, as it cools so soon). Place combs in the new hive as fast as fitted.—Gently place the bees at the entrance of the new hive, which they will enter at once; when all are in, contract the entrance for a few hours, when the bees have disgorged their honey, they will protect their home.—It is well to place the hive where the old one stood, while you are transferring; this will keep many bees there as they return from the fields, while the transferring is being done. This operation is plain and simple; we can transfer 2 swarms sooner than we could write how to do it.

At the Georgia State Fair for 1874, a $10 premium was offered for the best method and quickest time for transferring a colony. We transferred them, putting in all the comb, bees and honey in 21 minutes. We had no competition. In 1875, we made the transfer in 19 minutes. In 1876, we did it in 16 minutes. The committee pronounced it a scientific job, one of them saying that I was entitled to the "champion belt of the world," and would be for generations to come. A similar statement was made by a bee-keeper from Milan, Italy.

Rome, Ga. A. F. Moon.

For the American Bee Journal.

Two Queens in One Hive.

Friend Andrews:—I have just had a few stings in each hand and feel better! I had some curiosity to see the inside of a hive that seemed to be busy about something. They are bringing in pollen from *pyrus Japonica* and *Forsythia*. The latter are blooming quite freely. Isn't it wonderful, at this date? I opened the hive and found 4 combs with brood. Two had sealed brood circles about 6 inches in diameter. Finding the queen, she appeared *small* and *barren*. This surprised me very much, for there was too much brood for such a mother, but upon further examination, I found another fine, large, light colored, young queen. The old queen is dark, and mated with a black drone. Now, what bothers me is, where did the other one come from? The old queen can't be her mother. I'll just wait and see what kind of workers hatch out. Here is another case of two queens in one hive. The old one has her wings clipped. I'll clip the other one's wings too, and see what will become of them; especially in swarming time.

S. C. Dodge.

[I have a large number of the *pyrus Japonica* plants in my yard. Mine too was full of buds, nearly ready to burst open, but a killing freeze came and they went "where the woodbine twineth." Bees in this locality were flying every day, up to that date.—I observed that mine were busy carrying in something, not pollen. A confectionery pedler, with a wagon, was manufacturing candy in one of our streets, and my bees were getting a "free lunch" at his stand.—One day, they attacked him in such force that he surrendered to them, and they took *all*. Quite a number of our citizens collected about his wagon to witness their "bold robbery," and many comments were made about their golden beauty. Some advised resistance and a general slaughter, but the gentleman positively declined to kill a single one of them.

Two queens in one hive occurs quite frequently. A number of such instances are reported in the Bee Journal. I had 2 colonies last season, each containing two queens. From one, I removed the young queen as soon as discovered. In the other, I let them both remain for about 6 weeks, then removed the old one, and gave her to a friend. In both these instances, I think they were preparing for the demise of the old queens, one had her wings clipped, and the other a leg. W. J. A.]

Foreign Notes,

GLEANED BY FRANK BENTON.

Translated from "Bienenfreund" by F. Benton.

The large Bee, Apis dorsata, of Java.

BY EDWARD CORI, BRUEX, BOHEMIA.

(*Continued from Dec. number.*)

Were I still young and in possession of the necessary time and means, I would, in my inclination toward, and love for bee-culture, regard the importation of this race of bees as a noble life-work, and with great pleasure would undertake to penetrate the primitive forests of Java, to seek out and capture a colony of these bees, then increase them there, and finally bring them alive to Europe. With the greatest confidence in its success, I would undertake and proceed to execute this work.

When intelligence and practical qualifications for an undertaking, and an earnest will, with great perseverence in its execution are united, it rarely happens that a reasonable aim desired, cannot, with the help of God, be reached.

By means of rope ladders I would surely be able to reach the lodging of *Apis dorsata*, even though the same be in the high trees of the primitive forest.

Against the ugly sting of this bee I would protect myself and my Javanese assistants, by means of a good mask for the head, and by smearing the whole body and impregnating the clothing with strong-smelling petroleum; for the highly offensive odor causes every bee to avoid stinging anything that has been moistened with it.

I would overcome the colony by means of strongly narcotic smoke, and, if necessary, paralyzing means, whose gasses could be led from tin receptacles into the dwelling of the bees through rubber tubes. The removal of the queen with a portion of the colony could be accomplished in accordance with the local conditions by practical work.

The locating of the precious colony, through the employment of a queen-cage for confining the queen periodically. so as to retain it in a suitable hive, as well as the rearing of young queens, would be with me, as with every practical apiarist, no difficult task, because *Apis dorsata* is not inclined to wander.

Assistants in this undertaking cannot but be obtained among the natives of Java; the attractions of money, of good words, and of careful guidance would not fail to produce a willingness to serve, particularly on the part of such poor islanders. Neither would the assistance and support of the Dutch colonial government be withheld, whose liberality in the advancement of undertakings for the benefit of natural science and natural economy is well known.

Even the transportation of the bees to Europe would turn out as desired, notwithstanding the extremely warm winds on the passage through the Gulf of Aden, the entrance from the Indian ocean to the Red sea. I would take only weak colonies with me to Europe—those consisting of but a few hundred workers. The transport-hives I would construct of light strips of wood, with wooden bottoms and covers, the latter removable, and containing numerous openings for ventilation. The covers could be taken off during the passage through Aden, and the hives placed in the free air in the shade of some object on shipboard. The bees, in their hives of light, uncovered strips—quite as though they were in the open air, would be enabled to bear the great heat even better than the passengers, and would certainly stand the journey and arrive alive. An occasional careful sprinkling with water would refresh them. In the transport-hives I would place neither empty combs nor those filled with honey, but only a few unplaned boards perpendicularly, on which the bees could hold fast. I would supply the bees with food, as well as water, by placing at the top of the hives receptacles with thick linen bottoms, through which they could suck honey or water.

I confidently believe that in this manner I would come into possesson of this *Apis dorsata*, so inestimable in its worth to bee-culture, and would be able to import it to Europe.

To be sure, these are only ideas which I present here—a kind of a dream of a hoary-headed bee-keeper, yet, I like the liberty of expressing my views here, because I hope they may sometime be of use to our bee-culture.

In case some worthy reader of this valuable Journal would put into the young, true mind of a son, who is already practically informed in bee-matters, and who possesses a preference for the calling, these,—my ideas, it might chance that the young bee-keeper having, in his life occupation, reached the island of Java and passed some time there, remembering *Apis dorsata* and my ideas, would undertake and accomplish the project of capturing a colony of this race and bringing, or sending it to Europe. His name would forever shine with honor upon the eternal page of history—that of apistic and national economy, near those of our great masters in bee-culture, and, should great governments honor him with large premiums for his services, it would be but the reward which such a great and useful work would merit.

In a recent number of *Die Bienen-Zeitung*, the great German bee-master, Dr. Dzierzon, describes the mating of a drone and a queen; which occurrence he was fortunate enough to be able to observe on the second day of July last. During more than 50 years of close observation—particularly of the movements of young queens, such an opportunity, he says, has not before presented itself to him.

The Dutch government is about to send Italian bees to the Island of Java. An agent of the minister of the Colonies has ordered, of Dathe, 8 stocks, the necessary implements, and a practical apiculturist.—Dr. Dzierzon is to furnish 8 colonies also.—S. H. Rykens, son of the director of the seminary in Groningen, will conduct the enterprise, and will be installed as a teacher of bee-culture, in Java, with a salary of 5000 marks ($1.825), which, later, is to be increased to 10.000 marks.

Herr Ad Hauffe, who obtained Italian bees of Dr. Dzierzon, in 1852, and who was the first to cultivate that race in Saxony, recently gave his experience regarding the Cyprian bees. He claims that, as is the case with Italian hybrids, it is only the hybrid Cyprians that are more inclined to sting than the common bees or the Italians; that the pure Cyprians are very docile. All know how many times novices in bee-culture, who could not tell a hybrid Italian stock from a pure one, or who did not know how to get Italians off the combs without making them angry, have affirmed that the latter were crosser and more inclined to sting than common bees. It is quite well also, to consider that the Cyprians may possess as marked peculiarities as the Italians or common bees, and in view of the fact that they will likely be among us another season, it is best to know all that is said about them across the water.

"The Bag-pipe Bee.—(*Apis amalthea.*) This is the name given to a race of bees inhabiting Havana, Cayenne, Surinam, etc., and which must produce the sweetest, best-tasting honey. The Bag-pipe bee has the size of our ordinary house-fly, and is quite black, with brown antennæ and feet. These bees build their nests in the form of a bag-pipe, in the tops of trees. Their cells are unusually large and contain much honey, which however soon ferments and changes into a strong drink of which the Indians are very fond, and which must have a very agreeable taste."—*Bienen-Zuechter.*

Correspondence.

For the American Bee Journal.

Various Matters.

Dear Editor:—The American Bee Journal is still improving, and is a very welcome visitor. In worth, it is fully equal to those volumes edited by Mr. Samuel Wagner. Many single numbers alone are worth the price of a year's subscription.

HONEY MARKET.

The potent skill and experience of older bee-men have overcome all obsticles in the business, and made it a sure one; that is, practically so, except one enemy that we still have to conquer; and when that is conquered, all others (such as wintering, foul brood, bad seasons, etc.), will fall into insignificance. This enemy is a "*Glutted Market*." I have never had it to contend with until this last season, from the fact that we have had, during several years, a series of bad seasons, and I had run my bees for queen raising, mostly, and was almost the only one who had honey for sale in this section, so I had the market all to myself. I had come down by degrees, year by year, from 37½ cts. to 20 cts., and last season had to come down to 16⅔ cts. retail, and 12½ cts. by the barrel; and finally to 10 cts. by the barrel, for extracted honey. I still retail my comb honey at 20 cts. I can now appreciate the complaint of other bee-men, in the want of a market for their honey. I would not have had such trouble to sell my honey, had not other bee-keepers around me got plenty last season; most of them, for the first time for years. They have done as James Heddon says, glutted every grocery in the neighboring towns with their broken and mashed up honey, at any price they could get. Two of my most successful neighbors came to me, and said they had tried, all around, to sell their honey, but could not at any price. One of them offered me all his bees at a very low figure, except two colonies for family use.—The other said he would sell me all but 2 or 3, as he could not make bees pay without a market, and would not keep bees to give the honey away.

I see but one remedy for this evil, and that is to create a market; and that can only be done by a more extensive use of the luxury, for to this day, it is used only as a luxury. I have never seen honey on a table at hotels, or weddings, nor do I see it on family tables, only when visitors are present. It is on my table, three times a day, the year round, just as it is on D. D. Palmer's. It is astonishing that people are so ignorant of the healthfulness of extracted honey, and of the unhealthfulness of all other sweets that are constantly on their tables, such as syrups, molasses, etc. But the present age is an age of learning, and I do not think people will continue to be so ignorant many years. It is contended that the low price of honey, at present, will bring it into general use, and so create a market. This does look reasonable, and I hope may be so. Specialists would furnish the market with the very best article, in the most marketable shape, but I do not think they could afford it, at the low figures it has come down to. It is only specialists who fully understand it, and are able to furnish it in the most marketable shape, for a reasonable price. It is no little, or easy labor. How friend Cook could call it such a light and easy occupation, at all times, I am not able to see. I have worn out, many a time while extracting, hiving, etc. As all practical bee-men know, bees frequently require constant work with them, in just such days as the apiarist would rather not be out in the hot sun. I have frequently had my clothing wet with perspiration, as if I had just emerged from a bath with my clothing on. Bees require everything done at exactly the right time, or there is no success with them. Can farmers, or others, who take no pains to learn the nature and habits of the bee, know how, or take the time to attend to them, as the necessity of the case requires? No; specialists only will do this!

I will now ask practical bee-men a question, which I have never settled by experience yet. When extracted honey, in barrels, sells at 10 cts., what ought honey-comb to sell at, to equal it? I have not had experience with both attentively enough to satisfy myself. The nearest I can come to it is that there is 15 cts. difference per lb. If extracted honey sells at 10 cts. per lb., comb honey should be 25 cts. In the last 2 years, I have only made 5 cts. difference, from the fact that people here have come to understand the difference between comb and extracted honey on the stomach, and I can sell more extracted honey at 16⅔ cts. than comb honey at the same price. In fact, I can only sell the comb to such as have not learned that wax is unhealthy for the stomach.

COMB FOUNDATIONS.

I am very glad to hear that the comb foundation is a success. I have kept quiet, and never tried them, from the fact that I thought they would prove a failure, such as fertilization in confinement, etc. If spared, I expect to give them a fair trial the coming season.

FERTILIZATION IN CONFINEMENT.

As to fertilization in confinement, I think no one has experimented with it more than I did, nor do I think any one succeeded. If Mrs. Tupper succeeded, as she claims to have done, why in the name of common sense did she quit it? Who would succeed with a thing of such vast importance, and then quit right off? N. C. Mitchell comes next, but you all "*know* him."

I will here relate a fact in my experience, and leave you to judge, and remark as you please how it was. To make you fully understand the case, I will number the nuclei. No. 2 sat just 8 ft. from No. 1, in front. The queen in No. 2 hatched with no wings; but otherwise was a very fine and sprightly one. I was, at that time, trying fertilizing in confinement, and determined to give her a trial, as she had no wings to fly. A week after she was hatched, I went to No. 1 to put in a cell. I then examined No. 2; the wingless queen was gone; next day I examined again, but could not find her. Then I opened No. 1, and found the cell was destroyed. I then gave both of them another cell, and in 2 days after examined both again. No. 2 had a new queen; No. 1 had destroyed the cell again. I then examined and found, to my surprise, that the wingless queen was in No. 1, and laying. She was then but 11 days old, and I had tried the fertilizing fixture on the No. 2 nucleus from the 5th day of her age to the day that I missed her. This queen became a No. 1 layer, but died the next winter.—The question is: Did she fertilize in the cage or while she was out? If, while out, drones must have found her on the ground or on a bush, and in returning, she got into the wrong nucleus. R. M. Argo.

Lowell, Ky., Jan. 4, 1878.

For the American Bee Journal.

Wintering—Shading Hives.

We are having, so far, the warmest winter within the memory of the oldest inhabitant. During this month there has been less cold weather than we sometimes have in April. A soft maple tree, that stands in front of my study window, is nearly in full bloom, the flowers having opened yesterday. If it were not that the morning is cloudy and dark, with a little rain, the bees would be busy among the blossoms. Surely, the like was never known before.

A gentleman from Indianapolis informed me, last night, that at that place strawberries are in bloom in the open ground.

Bees on the summer stands are wintering exceedingly well. They have certainly been better out of doors than they could have been in cellar or bee house, during this warm weather.

I see that some writers recommend the shading of hives during winter. I am satisfied that this is bad advice. In a very cold winter, the hives in my apiary that wintered best were those that were most fully exposed to the sun, and that fronted the south, so that the sun shone full on the entrance of the hive; and those suffered most that were most shaded. M. Mahin.

Logansport, Ind., Dec. 22, 1877.

For the American Bee Journal.

The Season in Minnesota.

I think much of the Bee Journal. I am an old man, have practiced dentistry for 40 years, my eyes and my nerves have failed me for that, and I find bee-keeping just the thing for me. I have kept a few for 5 years past. Have now 43 colonies, 10 of them Italians. They did very fairly the last season. June and July were the best honey months I have ever known, for white clover and basswood; but August was dry, and September was cold, so they were light in the fall. Had to feed some. I have best success wintering on summer stands. I pack straw, about one foot thick, around the hive, except the front end, which is double, with half an inch space. I use a packing of straw over the bees, in place of a honey board. My hives are of the Langstroth style, but 12 inches deep. Have produced comb honey principally. The last season, I used section boxes. Find a home market for all I can produce, at 25 cts., though plenty of honey is brought in buckets, pans, etc., at from 12 to 20 cts.

My locality is not the best. Lake Pepin is on one side of me, 3 miles wide, with timber on the opposite shore, and many bees are lost in crossing. In the opposite direction, the bluffs are about 1½ miles from me, and are 100 feet above the lake, which is the prairie level. These bluffs are cut with ravines, in which is timber, with some basswood among it. So my bees, for some of their stores, go some 3 or 4 miles. Between the lake and bluffs there is white clover in abundance, when not too dry. Also have garden bloom, such as currant, raspberry, plum, apple and buckwheat. It was so dry here in August that I got nothing from buckwheat. I sowed the spaces between the railroad track and the fences, last year, to mustard. I design to try some mignonnette next year. My hives averaged about 40 lbs. surplus, the last season. D. R. Boutelle.

Lake city, Minn.

For the American Bee Journal.

Bee-keeping as an Avocation.

I began bee-keeping from a desire to have an avocation that should be suited to my temperament and my profession. My experience has been delightful. It seems as if nothing could have been more in accordance with my desire.

1. In the first place, the bees themselves are most interesting objects of study, so that one who has become weary in his usual duties turns to them with a hearty zest, and becomes so absorbed in observing their structure and habits that his mind has the best kind of recreation,—recreation that comes from a different and attractive occupation.

2. To keep bees according to modern methods, in movable-comb hives, and with the aid of the honey-extractor, comb-foundation, artificial queen-rearing, and nucleus swarming, is an art that requires careful thought and close observation. It is an art so full of interest and pleasure that I think very few thoughtful people, who once enter upon it, will fail to find it very absorbing indeed. To perform all the operations in bee-keeping in the most successful way, requires a skill and delicacy of manipulation that will most surely call one's mind away from the cares of his regular vocation.

3. The labor of making hives and frames, and of getting every part to fit with the nicest accuracy, so that every hive and every frame is perfect in the most minute points, is calculated, also, to give the mind a beautiful change from its ordinary pursuits. It is a labor, that, when successfully accomplished, gives a satisfaction that can be appreciated only by those who have experienced it.

4. The larger part of the work in bee-keeping must be done in the open air. For all whose usual work keeps them much indoors, this is a most important point. This open-air work is done in pleasant weather, and under the most favorable conditions as to health, the mind being so fully taken up with the work that there is no thought of laboring for the sake of exercise.

5. While one is thus getting rest and pleasure in the care of his bees, the product of his bees will richly repay him for all his labor. Many persons think they cannot

afford the time for exercise in the open air, so they neglect it, and in a few years break down. In bee-keeping the honey will pay them for their time, and the good health and pleasure will be so much clear gain, so much stock laid up to help them in their customary work. If laborers, mechanics, clerks, teachers, clergymen, in country, village or city, would keep a few swarms of bees, they would obtain not only a delightful recreation, but also a delicious article of food for their tables.

6. I passed my last vacation of two months,—July and August,—at home, and every pleasant day I was among my bees.—Those were very happy hours that I spent in the orchard, surrounded by my busy little friends, attending to their wants, and watching their progress. They seemed to understand my interest in them, and to repay it by increased industry. Many a moon-lit night in the honey season, I sat for hours under an apple tree near the hives to listen to their roaring, and enjoy the view of the fairy-like city, with its hundreds of thousands of inhabitants, that had sprung into existence under my guiding hand.—Through all my work your little JOURNAL was my "guide, philosopher, and friend." I hope it may lead many more to an avocation which I am sure will give them health and pleasure, and a fair profit for their labor. O. CLUTE.

Keokuk, Iowa, Nov. 15, 1877.

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Wintering Bees.

In the *Country Gentleman* for Nov. 22d, I notice some extracts from Mr. N. N. Betsinger's address, delivered before the Bee-Keepers' Association, at its recent session in New York. To those who know Mr. B., it will be a matter of no surprise that he should advocate a theory which differs so widely from the experience of all others. I do not doubt Mr. B.'s sincerity in his statements. I have sometimes thought, from the influence he exerts over our conventions when addressing them, that bees, under his care, would become changed in their nature, and make success for him out of what would be failure for others. That bees must have a sufficient amount of empty combs to cluster on to form a compact body, I had supposed, and yet believe, to be an established fact. When the cluster is formed in cold weather, a bee occupies each cell within the given space making the entire body of bees even smaller than if the combs did not pass through the cluster. This is from the fact that the walls of the cells are very thin, and by filling them, the bees are arranged in more perfect order than they could be otherwise.

Had Mr. B. qualified his statement by saying that combs might be placed solid in the center, full of honey, when wintered in a warm place, it might not have seemed so entirely erroneous; or had he said, that often too much comb is supplied with the honey, too far from the cluster in different directions, I should have agreed with him then. As bees naturally fill their combs with honey, they commence at the top; and seal the cells there first. As the season closes, the brood nest is limited to the bottom and center of the hive, and the spaces in the outside combs, at the top, rear, and partially at the front of the center combs, will be filled with sealed honey. In such hives, if the combs in the center are sealed down too far to allow the bees to cluster without coming between combs of sealed honey, they will crowd even below the bottom of the combs. If they are obliged to cluster between combs so filled in very cold weather, they will be sure to be found frozen. I have noticed bees so frozen in several hives this present month, even before severe cold weather.

The assertion has long been acknowledged true that "hives so full of sealed honey that bees have not room to cluster, without remaining between combs so filled are in poor condition for the winter;" and I believe it to be a truth which corresponds with the experience of every practical bee-keeper, unless it be Mr. B. The object of this article is to prevent the inexperienced from losing bees by following the advice of one whose experience differs so widely from that of all reliable writers on the subject.

Mohawk, N. Y. L. C. ROOT.

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For the American Bee Journal.

Honey-dew.

The question what honey-dew is, and how it is procured, appears to have been variously answered. Some contend that it is the product, or secretion of the aphis, a small insect—others that it falls, and is the product of some atmospheric influence. I am inclined to believe that neither of these theories are true, and that the origin of honey-dew is generally or entirely misunderstood. That it could be the secretion of the aphis in whole, or in part, in the quantity in which it is found in this country, is absurd. It is frequently found in such quantities as to drip from the leaves of the trees. There are certain facts connected with it that indicate very clearly its origin and nature.

1. It is never found on all kinds of trees and plants at the same time.
2. It is never found on dead leaves, or anything dry, except as it has fallen, or been blown from some green vegetation.
3. It is always found when vegetation is in a healthy and growing state.

These facts show that it does not fall, or is the product of the aphis. If it fell, it would be found on all objects alike,—if the secretion of the aphis, it would always be found where they are, and on shrubs on which they work. I have found it in abundance where no insect could be discovered with the microscope.

Honey-dew is generally, or always produced by the exudation of saccharine matter from the leaves of trees and plants. It is the same substance that is found in the flower. When the tree is in a very growing state, more saccharine matter is produced than is necessary for the health of the plant, or tree, and it is thrown off in the way of perspiration, through the pores of the leaves. Honey-dew is probably more abundant in this country than in most others. It is more generally found on the hickory trees than on any others—always when the tree is in a very growing state.—It is generally found at two seasons of the year; in the spring, when the leaves are full grown, and during our spring rains—and in the fall, after the commencement of our fall rains, and the trees take a second growth. During the summer of 1860, we had a very dry summer; from March to August no rain fell. All vegetation took a second growth, and honey-dew was so abundant that it dripped from the hickory trees. Those of us who have noticed these things can generally tell when honey-dew will appear, and in what quantities. If the season is very favorable for vegetation, and the growth very rapid, honey-dew will certainly appear in profusion. It never does appear in the season when vegetation is in a suspended state.

In the winter of 1862, honey-dew was abundant on the pine trees, most of the winter. It was an open winter, and the season of growth for the pine trees. My bees gathered honey all winter, of a light, thick character, and which candied very readily. Bees gather honey very rapidly, when the honey-dew is on the leaves.

It is of different color and consistency, according to the color or nature of the source from whence it comes.

From the leaves of the post oak it is dark and thick; from the hickory it is lighter and thiner. The honey from the hickory leaves, I think, would be considered No. 1 honey. From a close examination of the leaves with a microscope, I think I have demonstrated the origin and nature of honey-dew. It is the same nature and color of the honey made from the flower of the same tree. For instance, honey-dew is found frequently on the peach leaf, after the flower has gone, and is of the same taste and color as that made from the bloom. In this country in 1862, the honey-dew could not have been from the aphis, for it abounded in the winter when they were not out, and they could have had no connection with it. I am inclined to think that where the aphis have been found in connection with honey-dew, they were attracted to it as a food. In this country, it is certainly the saccharine matter of trees and plants exuded through the leaves.

My theory, I think, will account for its presence in every country. The facts, which I have stated, certainly overthrow the theories which have been advanced to account for its appearance heretofore.

W. K. MARSHALL.

Marshall, Texas, Jan. 3, 1878.

For the American Bee Journal.

Cellars versus Summer Stands.

"Experience is a dear school" is an old saying, and "fools will learn in no other" belongs to it. The latter I hate to apply to myself, but it hits me some this time. Last winter reduced my stocks from 139 in the fall to 12 in the spring of 1877. It was no bee cholera either, or dysentery, but starvation with plenty of honey in the hives. It came about in this way: I commenced bee-keeping about 8 years ago, and bought a few stands; I had one presented to me.—The first winter, I left them on their summer stands in box hives, made a roof over them, and the house protected them some from the north winds, but every warm day that they could fly, they came out and got down on the wet, cold ground, or worse, in the snow, and never again saw the inside of the hive. Next year I transferred them into Langstroth hives, and put them in my cellar, and they did well, loosing but a few. Last winter I intended to quit my occupation, milling, for a while, so I made calculations to move my bees 10 miles, to a small farm I owned, where there was no cellar.—Thinking I could move them best on a sled, I left them on their summer stands, waiting for good sleighing, but it did not come. It got cold about Dec 1st and kept getting colder, and did not let up, so the bees could not get at new stores, and all but 12 of my 139 colonies starved to death.

I want no more wintering on summer stands, without ample protection. I have now dug a cellar, and am going to try again. I now have 24.

D. H. KELLER.

Fulton Co., Ill., Jan. 2, 1878.

For the American Bee Journal.

Management of Box Honey.

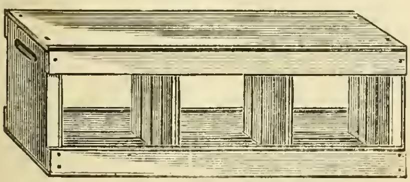
Box honey should be taken from the hive as soon as it is finished, or as soon thereafter as possible. No apiarist can expect to have his honey sell for the highest market price if he allows it to stay in the hives for weeks after it has been sealed over, allowing the bees to give the combs a dirty, yellow color, by constantly traveling over it. We go over our yard once a week in the honey season, and the past season, it took 4 days to get over it, leaving us but 2 days to attend to other duties in the apiary.

It is often asked: "What shall we do with our honey after it is taken from the hive?" All box-honey-producers know that there always will be cells next to the box that are partly filled with honey, but not sealed over, and when taken from the hive, if the box is turned over sidewise, the honey being thin, will run out, making sticky work.

We also see in the papers, questions like this: "What shall I do with my honey?—The honey is oozing out of the cells, and the whole comb has a watery appearance." While in New York, last fall, we saw honey by the 1,000 lbs. that looked as if that question should have been asked some time before, as it had been kept damp so long as to become soured, and smelled badly.—The remedy for this is a small, warm room: and this answers the above questions perfectly. Bees evaporate their honey by heat, and therefore, if we expect to keep our honey in good condition for market, we must keep it as the bees do, in such a position that it will grow thicker, instead of thinner all the while. Our honey room is situated on the south side of our shop, and is about 7 ft. square, by 9 ft. high. We have a large window in it, and the whole south side is painted a dark color, to draw the heat. In it the mercury stands from 80 to 95 deg., while our honey is in it, and when we crate it for market, we can tip our boxes as much as we please, and no honey will drip, neither will any of the combs have that watery appearance spoken of above, but all is bright, dry and clean. A small honey house, separate from any other building, painted dark, with tin roof, would be still better, but would not be as handy.

But if we keep honey thus warm, the moth will make its appearance, and make it unfit for market, by gnawing off the sealing to our beautiful combs, and also by their sickening appearance in the boxes. The next question, then, is: "How shall we head off the moth?" They will always trouble combs of any description, if taken from the bees in warm weather. We will give the way we manage. We build a platform on either side of our honey room, of scantling, about 16 inches high, and on this we place the boxes, so that the fumes from burning sulpher can enter each box, (the section boxes pile admirably for this purpose); in about two weeks we sulphur, by burning ¾ of a pound of sulphur for every 200 cubic feet in the room. We take coals from the stove and put them in an old kettle, so as not to set anything on fire, pour on the sulphur, and push it under the pile of honey, and shut up the room.—Watch through the window, and in 15 minutes after the last fly or bee that chances to be in the room has died, open the door and let out the smoke, for if it stands too long the smoke may settle on the combs, and give them a greenish hue. As there may be a few eggs that have not yet hatched, we sulphur again in about 10 days, after which the honey will be free from moths, if you do not let millers into your room.

Novice says, on page 245, vol. 5 of *Gleanings*: "If the sections of honey are put into the market at once, as they should be, in our opinion, there will be no need of any fumigation with sulphur." On page 241, same vol., he advises having your shipping case by your side while taking off honey, and packing the honey in it, as it is taken off. No worse advise than this could ever get into a bee paper. While in New York, we saw more than 1,000 lbs. of honey with the sealing all mutilated, or entirely eaten off, with great disgusting worms in the boxes, sent out by some careless bee-keeper, whose opinion was, if he had any, the same as that quoted above. After your honey has been sulphured the last time, you are ready to pack it in shipping cases or crates, the best of which is one gotten up by P. H. Elwood, Starkville, N. Y., and holding but 12 section boxes, of about 2 lbs. each.—Speaking of his crates, Thurber & Co. says, "they presented the finest appearance of any crate they had received the past year." The crates and boxes should all be kept clean and bright, and no pains spared to make the honey present as enticing an appearance as possible. Thus you will realize the highest market price for your honey, and in a year or two your honey will be sought after by those desiring to purchase, instead of your having to ship it on commission, or peddling it out.



THE SHIPPING CRATE.

G. M. DOOLITTLE.

Borodino, N. Y. Jan. 8, 1878.

[The "Crate" spoken of by friend Doolittle is identical with the "Prize Crate" described on another page.—ED.]

Western Illinois Convention.

I submit the following remarks on the Western Ill. Convention Report in the January number:

BEST METHOD OF CATCHING BLACKS AND INTRODUCING ITALIANS.

I like McGaw's plan of catching queens best, only when you take cap off, set it on the end in the shade, and cover the hive for a few minutes. This gives the bees time to recover from their fright, and to show by their quietness, or restlessness, whether the queen is with them; also to prevent her flying up over the cluster when you pour them on the sheet. I then put her in the cage, and put it down in the middle of the hive for 6 hours; then remove her and put Italian in the same cage for 48 hours, and let out about sunset, I never failed this way. I have lost valuable queens, sometimes by failing to remove all cells 7 or 8 days afterwards. Italians rarely ever start the cells with the queens inside, but blacks hardly ever fail to do so.

FERTILE WORKERS.

These used to be my masters, but now I am their master. About mid-day, take out 2 or 3 middle frames from the hive, with a fertile worker; go about 10 yards from the hive and shake off every bee in a pile; then take the frames to a strong stand, and exchange for frames full of brood, with the young bees just emerging. Brush back the bees, and give the frames to the fertile worker-stand and close up. Then you can give them a queen in the cage or cell to rear one by night, as by that time there will be young bees enough out to accept and protect either. Besides, if the fertile workers ever found their way back to the hive, they will kill them when they have a queen or a cell. I never failed in this method.

BEST TIME OF UNITING.

A tolerable cold evening, just at dark, alternate frames with bees on, and shade others on top of frames; feed with scented water and sugar.

BEST TIME TO PUT IN QUEEN CELLS.

If the cell will hatch in an hour, it will do at once; otherwise, better wait at least 8 hours, or till late in the evening. I have tried McGaw's plan of putting in at once, but always had them destroyed. Never cut them out in less than 9 days.

INTRODUCING VIRGIN QUEENS.

I have never succeeded with one in a a cage.

BEST METHOD OF SWARMING.

First raise the queen inside of the hive, by means of partition board, and build up. I have tried 20 or 30, but have never beat this. I also prefer natural swarming, if they come early enough to suit me.

HOW TO GET BEST YIELD OF HONEY.

Stimulate in the spring, using Graham flour, on Palmer's plan; but never feed sugar or honey in day time. Close entrance to within 1 inch, keep warm and feed a little on top of honey board, at night, three times a week. Have them all strong when the main honey season opens. One strong stand can do more than 6 weak ones.

BEST PROTECTION FROM BEE STINGS.

First, try to get rid of your cross bees.—There is a vast difference between bees. I never took the trouble to use protection, not even a bee veil, with some colonies I have had; to others, I would as soon think of going without protection, as to attack a leopard without it. First, approach the colony with Bingham's smoker; give them a puff, in the entrance, before you touch the hive; be careful not to strike your toe against it, then open gently, ready to give another puff of smoke on the least show of fight; but never puff unless they do fight.—I use nothing but the bee veil. Gloves are worse than useless. All clothing should be light colored, no red nor black.

R. M. ARGO.

Lowell, Ky., Jan. 5, 1878.

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For the American Bee Journal.

Adaptation to Our Business.

For 11 years I have read with pleasure and profit the AMERICAN BEE JOURNAL, and have gathered the experience and best thoughts of its able correspondents. I have sent it about 50 new subscribers, since I began taking it. Some of them are successful bee-keepers, and well posted in the business, but others soon played out, not having energy enough to learn how to keep bees, or possessed no adaptation to the business. This is often the case in other pursuits. To succeed in any business, we must take pleasure in it.

In Southern Kentucky there is not one bee-keeper giving his whole time to the business; all have other pursuits, and the bees get but a small share of their thoughts and labor. I wish that some of our young men, who love the honey bee, and delight in its labors, would prepare themselves for the pursuit of bee-keeping alone, as thousands are doing for other pursuits. I would not pursuade men or women to engage in bee-keeping, if they have no natural adaptation, or love for it.

Bee-keeping has been reduced to a science, and is capable of becoming a great national industry. The honey bee has been man's attendant in all ages, countries and climes; still, bee-keeping is but in its infancy. 'Tis true, that many valuable discoveries and inventions have been made in the last half century, and bee-keeping now takes a high stand among the various pursuits of man, yet, I believe we are but the pioneers in successful bee-keeping. We must advance—onward being the watchword of all who would succeed.

In addition to our standard works on bee-keeping, our bee papers and conventions, we need a school, where the science will be taught, and all the various manipulations practically demonstrated, so that our young men may graduate, and receive diplomas, as they do in law, medicine and other pursuits. Every state should have such a school, and then we may expect that the old and slovenly way of bee-keeping will be abandoned, and the millions of pounds of honey that now go to waste will be gathered and stored in waxen cells, to bless mankind.

N. P. ALLEN.

Smith's Grove, Ky., Jan. 7, 1878.

For the American Bee Journal.

Chips from Sweet Home.

In the AMERICAN BEE JOURNAL, of Jan., page 9, H. Haines says, under date of *Nov.* 22, "I have just built a *bee house* 52 ft. long, 7 ft. wide and 8 ft. high." A bee house of such dimensions is certainly of a queer shape. Is in not a cave? Also, "I have stored 50 hives, (double tier), and hope they will winter well. I have 50 colonies out of doors; top of caps filled with chaff, and shall thus try both ways." I had a postal card from H. Haines, dated *Nov.* 28, —6 *days later* than the above, in which he says, "Bees O. K. 83 in house,—17 in *cave*." Now, why does he not tell the same story to all? Is it a winter repository, a cave or a house? Why did he say, Nov. 28, that he had fixed 50 for out doors, and 6 days previous, that he had none out doors?—Which of these two stories are correct?—Or, is neither? If this is not contradictory, please untangle and make it straight.

I would not willingly wrong any one, but it is as much of a pleasure for me to expose error as it is to hold up the truth. Why do not some of his *numerous* visitors tell us of his Cyprian bees, and how many hives of each kind? If he has as many orders, or names as he showed me at the Convention, why not satisfy the AMERICAN BEE JOURNAL and *Magazine* that he has Cyprian bees, and he only, and advertise. If he is the first to introduce Cyprian bees, to him the honor belongs. Let him send his receipts, etc. to the BEE JOURNAL, to prove that he is right, as the right wrongs no man, also, let him remember that two wrongs never make one right.

Eliza, Mercer Co., Ill. D. D. PALMER.

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For the American Bee Journal.

Apis Dorsata.

In the absence of further information about this bee, (which I hoped to receive before this), I will make some remarks upon Mr. Cori's article, which late information may confirm or show to be incorrect.—It is singular that this bee, according to Herr Cori, is not hunted in Java, and yet, in some of the other islands of the Archipelago is so fearlessly and successfully hunted, as described by Mr. Wallace in last month's issue. That "these bee-hives are in hollow trees" is an important fact, in addition to what Mr. Wallace gives us.—The bee-hunters probably consider it far more important that they also build in the open air, where their products can be the more readily secured.

Not many of our skilled bee-keepers would care to secure honey and wax after the method described by Mr. Wallace. It does not follow from the greater length of the sting that the wound is more painful, nor does the fear the Javanese have of being stung weigh much with me. We all know how the public generally view bee-keeping. "How long have you kept bees?" "30 years." "Did you ever get stung?" "Yes." "I would like to keep bees very much, but if I thought I would ever get stung I never would go near a hive." This conversation was with an army officer, who had been in many engagements. I gave him a frame of honey, exposed, to carry home. He remained a few minutes talking, before getting in his buggy, and a few bees, scenting the honey, followed him. He held the honey, and his wife drove. The next day I saw him, and he said he had a dreadful time with that honey. But for his wife's ridicule, he said, he would have thrown it away a hundred times. The bees followed a long distance. I said, "I prefer bees to bullets." He replied, "tastes differ, I prefer bullets to bees."

Mr. Wallace states that the comb was white, which shows that it was of that season. He is such a close observer, that had the comb differed materially in size or structure from that of the honey bee of his native land, England, he would, unquestionably, have noticed it. I am sure you all now feel as if you would like to be in just such a situation as Mr. Wallace was that day, and provided with a movable comb hive, and all other requisites to transfer comb and bees, and await the results to report to the readers of THE AMERICAN BEE JOURNAL. E. PARMLY.

* * *

For the American Bee Journal.

Mignonette for Bee Forage.

Last season, I was induced to sow a bed of Mignonette to give my bees an opportunity of finding forage, when other plants failed. I accordingly procured the seed of seven different kinds of that plant to ascertain which would best answer the purpose.

Although not put in the ground until after the middle of April, it appeared to be too early, for it remained about two weeks before showing itself, and then it was such a little tiny thing, that it appeared as if it would never turn to any account.

I planted them about a foot distant in the row, and made the rows two feet apart. I scarcely got one plant for ten seeds that were planted. At first I got quite discouraged when I saw in many spots not more than one small plant in four feet, and then so late springing up, that the weeds had almost choked them before they attained sufficient size to admit of being worked. However, I set to work with my pocket knife and cleaned out the largest portion of the plat, though I had to abandon some on the poorest portion of the land.

After being started under diligent cultivation, it was astonishing to see the rapid progress which they made. The plants soon covered the ground where the soil was good, and were out in blossom in a short time, and from that time forward, the bees were working on them by the thousand, from morning until late in the afternoon. I have seen them thick on it by eight o'clock, and not leave it until late in the afternoon. It yields pollen as well as honey, and you can easily know the bees that have been gathering from it as their thighs are red, whereas, almost all the other pollen is yellow, or different shades. I intend to plant a larger plat this season, with seed of my own raising; sow in a bed, planting about a foot distance in the row, with the rows two feet apart and in this way have full opportunity of hoeing it and keeping it perfectly clean. By thus getting it started in bloom early in May, I expect to have continuous bloom until frost, and even latter if the frost is not severe. I have said it will blossom from early summer until frost; this however, must be taken in a qualified sense. Take any single plant that blossoms out early, and, unless in very moist ground, it will be exhausted in its blossom by about the middle of August; but when you grow different kinds, some will bloom later than others, and these will continue correspondingly later, so by mixing different varieties, we can have continuous blossom from May until September or October; or by making a second planting, say in June, we can have the best kind of fall plants, from which to furnish the bees with the best kind of honey to winter, and thus be enabled to put them safely into winter quarters. I had plants which I set out in the very dryest time in July, that, when I left Algonac, in October, were just nicely started into blossom, and I distributed them among my friends for bouquets.

It has been stated that the bees work more upon the common sort (*reseda odorata*) those of the larger varieties. This however, I have not noticed in my observations. On the contrary, have found that on account of the spikes of the blossom being so much longer, the bees work most on the larger varieties. The common sort strikes earliest into bloom, but it is earliest to decay. I have some sorts which stand about two feet high, and grow like a tree, the spikes being from eight to ten inches long; while others do not grow so tall, they branch out and cover a space more than two feet square. On one of them, the largest of the lot, I counted three hundred spikes of flowers, and thicker than in the common sort.

A correspondent from California, stated that he thought "an acre of Mignonette would be adequate for a hundred colonies". This no doubt is correct—not that any person would say, that if there were nothing else to subsist upon this would be adqeuate —but when you give them this, in addition to what they otherwise would have, it will certainly secure an immense increase in the honey produced. He also, stated that he thought "2 lbs. of seed to the acre would be sufficient." My own impression is, that managing it as stated above, it will not take more than half that amount.

He adds: "Mignonette is reckoned one of the sweetest scented of garden plants, and is only valuable for its purfume, or its forage properties for bees. There is no plant, within the range of our knowledge, as valuable for bee forage as mignonette. And why? It will keep in bloom year after year, if not disturbed by frost, and it gives a longer period of bloom than any other plant. It gives more blossoms in a given space, and therefore more forage than any plant we have ever seen. Honey made from this plant has the most delicious fragrance of any that we have ever tasted, and when it has been tested in market, is far ahead of California, or any other brands of honey in worth, and brings much higher price. We think that our acre of mignonette will make enough forage for one or two hundred colonies of bees....We plaee mignonette in the lead of all other plants we know of, as a crop to cultivate for bee forage."

As for as my observation goes, I confirm the above statement. I distributed considerable of my extracted honey to my neighbors, who said they had never tasted anything so fine before. WM. THOMSON.

Conventions.

North Western Ohio Convention.

The N. W. Ohio Bee-keepers' Association convened at Delta, O. Jan. 3, 1878.

In the absence of the President, Vice President A. Fahnestock, of Toledo, took the chair; D. Kepler acting as secretary.

After the reading of the minutes, the chairman produced a letter from President E. L. Mann, stating his inability to attend, but hoping that the convention would be productive of much good. He reported that his bees were doing splendidly, and that he expected large increase and surplus during the coming season.

Members present were invited to submit reports of operations.

Mr. Pray, of Delta, gave his experience with purchased Italian queens. He had one that produced about equal quantities of black and Italian workers.

Mr. W. F. Williams had similar experience. He thought it the result of the queen being fertilized by a black drone.

Others reported similar experiences.

Mr. Clifton reported 58 colonies in winter quarters, with from 30 to 35 lbs. of honey in each hive. He thought a tight board fence on north and west advantageous. He had not been entirely successful in wintering, but turned to good advantage the comb and honey left by dead colonies, in building up increase, and artificial swarming. He had extracted twice from each hive during the season. His bees had paid him well.

Mr. Williams, of Henry Co., commenced in the spring of 1877 with 50 weak colonies; sold 2 and increased to 154 strong stocks, and got 2,000 lbs. of extracted and 400 lbs. of comb honey, in frames. He fed syrup to weak colonies in April and May; increased artificially and secured pure fertilization, even when surrounded by black bees, by confining young queens and fine drones to the hive till black drones have returned, feeding them on warm diluted honey, and then allowing them to fly out. He did not believe in taking queens reared in nuclei and introducing them to colonies; he built up these nuclei by adding hatching brood from strong stocks. He secured queen cells by giving eggs from pure mothers to queenless colonies, after taking from them all eggs and larvæ that a queen might be reared from.

The Chairman described the method of rearing queens, given by Mr. Russell, of Adrian, at the Michigan Convention. He said some bee-keepers who practiced natural swarming permitted only one swarm to issue from each colony, and giving that swarm a hive already filled with combs.—Such swarms often produced 50 lbs. of box honey in two weeks.

Mr. Pray had some trouble with queens laying in surplus boxes.

Mr. Williams found bees in cellars all quiet, with the temperature at 45° to 50°; at 53°, they were a little uneasy. There is economy in cellar wintering, as bees would only use about one-half as much honey as when left on their summer stands.

The Chairman said he went to the Michigan Convention to learn the best method of wintering, and found that most of the Michigan bee-keepers packed their hives in boxes, surrounded by dry chaff, and had abandoned cellars and repositories for wintering. He had prepared his with chaff, and would report the result at the next meeting. He should not remove them till warm weather in June. He advised those using cellars not to disturb their bees till settled warm weather in April or May.

Mr. Pray carried his bees to the cellar, (nearly half a mile distant), by hand, so as not to disturb the bees. The walls of his cellar were three thick, with dead-air spaces between each brick wall; double doors, cement floor and double ventilator.—It cost $130 and would hold 200 colonies.

W. F. Williams had his bee yard partially shaded, sloping to the south, but thought it of no value. He wanted all the sunshine he could get, except in extreme hot weather, when he would shade with loose boards.

The Chairman had his hives under pear trees, where they are shaded in the hottest part of the day.

Mr. Kepler said that with hives unpainted, or painted white, he wanted no shade, but if painted any color they should be partially shaded.

Mr. Williams offered the following:

Resolved that the traffic in dollar queens should be discouraged.

Mr. Clifton thought it best to obtain pure or imported queens and rear for his own use. He once bought some for pure Italians that were so cross that they stung everything within their reach.

The Chairman had no success in buying dollar queens; he had daughters of imported queens, and now reared his own queens.

Mr. Williams believed that the purchase of cheap queens was a great detriment—filling up the country with inferior stock—and urged the purchase of only the purest Italian queens, even if it involved the necessity of sometimes getting imported queens.

Mr. Kepler advised getting an imported queen to rear queens from.

Mr. Williams' resolution was carried unanimously.

The President announced the following discussions for the April meeting:

Italian Bees and Queens—Capt. W. F. Williams.
Introducing Queens—Mr. Clifton.
Profits of Bee-keeping—Mr. Rakestran.
Hives—Mr. Davoll.
Honey Producing Plants—Mr. Kepler.
Marketing Honey—Mr. A. Fahnestock.
The Pleasures of Bee-keeping—Col. Mann.

The Secretary was instructed to notify the persons named to be ready with their essays.

The following resolutions were passed unanimously:

Resolved that the proceedings be published in the Delta *Avalanche*, and THE AMERICAN BEE JOURNAL.

Resolved that the thanks of the Convention are accorded to Dr. Ramsey for the hall; to Messrs Pray, Hath, and other citizens of Delta, for entertaining bee-keepers from a distance; and to the proprietor of the Crosby House for favors extended to members of the Convention.

The Convention then adjourned to meet at Napoleon, O., on the first Thursday in April, 1878.

DANIEL KEPLER, Sec. *pro tem.*

Michigan Convention.

[Concluded from last issue.]

The following persons paid the usual fees and became members of the association:—Dr. Southard, T. F. Bingham, Prof. A. J. Cook, L. C. Whiting, Wm. Spedding, Dr. C. F. Ashley, B. O. Everitt, G. G. Allen, H. Barber, Jos. Butler, Wm. Thompson, F. W. Gilbert, D. G. Sheppard, E. Goodrich, J. W. Benedict and P. R. Wilson.

STATISTICAL TABLE.

NAMES.		No. in Fall, 1876.	No. in Spring, 1877.	Swarms in 1877.	Surplus Comb Honey, lbs.	Extracted, lbs.
J. O. Shearman	B*	100	60	40	1600	600
H. Bird, Jr.	M†	10	10	40	..	..
D. Falconer	M	10	10	40	..	..
H. L. House	M†	42	40	20	1100	900
C. Middleburgh	B*	16	14	24	600	..
M. B. Williams	I	32	11	23	..	..
Mr. Bryan	B*	32	30	50	..	3000
D. E. McCrary	B*	26	24	36	600	..
John Heffner	¶*	12	12	12	1000	..
Thos. Burt	M*	60	60	60	4350	..
Mr. Dodge	M †	60	60	60	1000	..
I. Hoag		..	3	6	60	..
T. J. Sutton		..	4	6	25	..
I. P. Weeks		..	..	13	75	..
G. G. Allen		..	17	13	400	..
J. W. Allen		..	25	25	600	..
B. O. Evarts		..	3	11	300	..
Wm. Spedding	B	..	27	7	850	200
H. J. Ray		..	10	15	325	..
H. Barber		..	15	..	..	350
P. R. Wilson		..	10	6	225	225
J. L. Standart		..	1	2	30	..
Wm. Thompson		..	6	4	20	125
Mr. Caywood		..	26	30	250	..
Miss M. Sweet		..	6	6	20	..
A. H. Russell		..	75	70	3000	3000
Jos. Butler		..	74	35	4000	..
Mr. Caldwell		..	18	29	200	..
T. F. Bingham		..	80	70	3850	2500
W. H. Shirley		..	83	12	4500	..
A. S. Weeks		..	59	15	3410	150
P. Leonard		..	16	12	613	..
J. Tomlinson		..	25	13	600	..
Southard & Ranny		81	81	56	3000	500
P. S VanRensselaer	B	..	8	15	600	600
H. H. Overmyer		..	116	199	..	10000
L. C. Whiting		..	20	56	..	..
Mr. Gilbert		..	50	40	500	..
A. C. Perkins		..	7	4	200	..
Mr. Porter		..	14	10	300	..
Mr. Conklin		..	2	2	15	..

* Wintered on Summer Stands.
† Wintered in Cellar.
B Black Bees.
I Italians.
M Mixed.
¶ Both Kinds of Bees.

QUESTION BOX.

The following questions were asked:

1. "Are incredible reports from the fraternity an advantage?"

The President replied that such reports were not frequently made, but that which often seemed incredible was true.

2. "Do bees injure fruit?"

Dr. Whiting said that in his observation bees did not cut their way into ripe fruit, but would work on any cracked or marred fruit.

J. W. Helme said that he thought that they *would* attack fruit, but only as a last resort, when they could get nothing else.—They would eat peaches and grapes.

Mr. Fahnestock said he was a fruit grower. He had 60 acres of it. His apiary was in his vineyard, and he had made careful examination for years, and he never knew sound fruit to be attacked by bees.—Peaches that had burst their skins were, of course, a source of food.

Dr. Southard had sat for hours at a time to watch for work of bees on fruit, but never saw them do it.

The President said that the cases were authenticated of bees attacking fruit, but there were very few cases. He had experimented with fruit placed before the hive, and never knew a case where the bees touched the fruit.

3. "Which bees are best, Italian or black bees?"

A vote was taken, and 13 voted for the Italians and 5 for the black bees. Mr. Bingham voted both ways, and explained that for breeding, and for extracted honey, Italians are the best; but for box honey, nothing could equal the black bees.

4. "Can bees be safely moved during the winter?"

Mr. Bingham said that it formerly was done very easily, but of late there seemed to be some difficulty.

Mr. Overmeyer said he would not hesitate to move them at any time, but he would want them to have a cleansing flight within 2 or 3 weeks thereafter.

Mr. Porter reported the removal of his bees on Thanksgiving, and he examined them this week and they were doing well.

Mr. Springer reported a case where a friend had removed bees from Canada to California in mid-winter, for two seasons, with great safety and success.

The opinion prevailed that it was safest not to remove bees till spring.

5. "What number of colonies can be kept in one place, where there is plenty of sugar maple, basswood and clover?"

Mr. Benedict said 1,000 colonies in one place, and 1 colony 3 or 4 miles from it would be found to do equally well.

Mr. Butler said he could not observe but his 140 colonies did just as well as his 30 formerly did.

The President found in California that 500 colonies were easily kept at one place.

6. "What is the best mode of dividing stocks?"

Mr. Bingham was called upon, and said he could hardly answer the question as put. He supposed it had reference to artificial methods. There were various methods, but it was about as cheap to buy as to divide. His hives sat upon a frame, and had movable bottoms. When a hive was breeding, he would place a hive with comb on top of it, and soon the bees would go up into it, and when the bees got fully to work, remove the old hive with the young brood, and the swarm is divided.

What to do with Surplus Stocks.

READ BEFORE MICHIGAN CONVENTION.

The surplus capacity of a hive should correspond to the size of brood chamber. If it far exceeds, in size, the brood chamber, it will be detrimental to storing honey. First then, there will not be bees enough to work in all parts of the surplus case at the same time; yet, we hear hive-venders say: "My hive will give the largest amount of surplus room of any hive known." Experience has taught us that a brood chamber of 2,000 cubic inches will not furnish bees for double that capacity of surplus. Such a hive will accommodate about 34 lbs. of surplus, and will crowd it with bees, but if double the size be given them, where are the bees to fill it? I can get more honey stored where the surplus is too small to accommodate all the bees, than in a surplus chamber that is larger than the bees can fill; and the comb will be brighter.

NATURAL SWARMING.

If honey be the object, then I prefer natural swarming.

1. Because I can run my apiary with but a comparatively small increase, no matter how much they are disposed to swarm. I allow no after-swarms to issue, consequently I make a short job of the swarming season.

2. Because it pays better to raise honey for sale than it does bees; and if I have but a small increase, then my stocks are all very strong, and it is from such stocks we get our surplus.

Some ask how I keep such strong stocks. I make them strong in May, and when they swarm in early June, I make them strong honey stocks as soon as they are hived, instead of compelling them to fill a new hive with brood combs, and let the best part of the season go by before they are strong enough to enter the surplus cases. I think it folly to try to prevent swarms from issuing after they once get the fever. No amount of tinkering with them will prevent it, short of division; and then you have two weak stocks in place of a strong one. If I should have a hundred stocks issue, I would not make more than 33 new stocks, compelling the ballance of the bees to store surplus. I do not pretend to know whether my plan will suit all locations or not, but it suits mine, and as it is to be supposed every practical bee-keeper should know just what his location will do, he should himself be the judge of it. In my location, white clover is abundant, but no basswood. I also have a very good fall pasturage. If I fail to secure a crop of white clover, I shall have but little honey to sell.

So I have adopted the plan of having large colonies to collect my surplus, as it must be collected inside of 45 days, if at all.

As soon as spring opens, and the weather gets warm enough, I go through every hive, and I make my selection for honey stocks. I work 70 to 85, according to condition for surplus stocks, leaving a balance of 25 to 30 stocks to draw on for brood and combs for new swarms. These new swarms I allow to build 2, or at the most 3 new combs; now the hive below being full, or nearly so, the bees have no place to store honey but in my sections—just where I want it. Besides, I get all my new combs built in my reserved stocks, and almost entirely worker-combs in my honey stocks. I clear out all my drone-comb.

The way I use the surplus swarms for honey stocks, after they are united to some stock that has sent out a swarm, is as follows: I mark day and date on each hive, and just 8 days from the issue of the swarm, I remove all queen cells, that is, providing I intend to return a swarm to this hive; or if not, I leave one cell to hatch. I invariably follow this plan until I have disposed of all my swarms. Such stocks will be very strong and will need plenty of room.—We often have to give them two cases of sections, or about 44 or 88 lbs. each.

We commenced the season of 1866 with 70 stocks, increased to 93. Receipts for that year was $831.47. We commenced the season of 1877 with 74 stocks, increased to 109. Receipts $810.00. Total for the two years, $1,641.47. JOS. BUTLER.

Jackson, Mich., Dec. 10, 1877.

What Shall We Wear?

READ BEFORE THE MICH. CONVENTION.

It is not to be expected that our apiarian brothers, whose attire is never an obstacle to any occupation, will be interested in the subject under consideration; we will, therefore, beg their indulgence while we engage in a little chat upon a favorite topic; and we will not be offended if they, meanwhile, turn a deaf ear, and ponder upon weightier matters.

What "the very latest" in apiarian fashions may be, it would be difficult to tell, but whether or not there should be a special dress for the apiary I conclude to be a question of importance, from my own experience, and from the fact that ladies contemplating a trial of apiculture, ask for information upon the subject.

"Is the ordinary long dress, with the veil and gloves recomended, sufficient protection from the stings of bees? If not, what shall we wear?" is the inquiry.

I have never visited a sister apiarist, and therefore can judge only from my own experience. When I began apiarian work, I had but 2 colonies, and it did not occur to me that any change in the dress was necessary, but as the number increased, it became apparent that some style,—safer and more convenient than the long dress, was desirable.

We manage, somehow, to keep house tolerably well under the same inconvenience, and even, in some mysterious way, to carry the baby and lamp up stairs at the same time without disaster, but for reasons not apparent, a comfortable and convenient attire for ladies engaged in outdoor employments seem to be regarded with general favor. Without stopping to ask why, in this case, and why not, in the other, we will thankfully accept our liberty and proceed to a consideration of the subject.—Besides the inconvenience of the long dress, the certainty of its becoming drabbled is another serious objection. It is often necessary to begin work before the dew is off the grass, or soon after a shower, and the long skirts becoming drabbled, are not only uncomfortable, but very unsightly; and if, perchance, a friend curiously ventures near, to watch our movements, will we not secretly wish him away, and so feeling, fail to make the occasion one of pleasant interest to him. As no economical woman will allow a dress, fit to be worn in the house, to be thus ruinously used, it follows that the worst, wearable dress we have will be the one chosen for the apiary. To say nothing of the love of self-respect we must feel when so attired, it is not policy. A pursuit which necessitates shabby and untidy apparel is one which a refined woman will never engage in, if there is any other alternative; and such an attire worn by a successful apiarist would, at least, be extremely prejudicial to apiculture for women.

Thus far, we have taken a negative view of the subject, and now come to the question direct: "What shall we wear?"

I reply, a dress that can be made short or long at pleasure. This can be done by the rubber skirt lifter, so generally worn when trailing dresses were worn on the street; or by some simple device of our own, so constructed that the dress can be instantly raised or lowered. Those who have no objections to being seen in the short dress, will, of course, choose it; but as many have, it seems desirable to combine the two, both for convenience and appearance. The style of the dress may be varied to suit the taste of the wearer, but I recommend the "Gabrielle"—made just long enough to touch the floor, and belted at the waist.—The neck should be cut down in front about one-third the length of the waist, to admit of the veil being tucked in, as it is neither comfortable nor convenient directly under the chin. The under-waist can be made of the same, or other material, and fastened at the throat. The sleeves should be quite long, to allow free use of the arms, hemmed at the wrist, and rubber tape, or cord, run in; and these to be pulled down over the gauntlets of the rubber gloves. The pantalets should be similar to those worn in the old "bloomer costume"—straight and full, and like the sleeves, with rubber cord in the hem, and fastened over, not above, the tops of the shoes. The suit should be of washable material, and mixed colors, as a drop of honey on the dress has the appearance of grease, and is very conspicuous on a solid color.

One width of black tarlatan, ¾ of a yard long will make the best veil. and with rubber cord in the hem at the top, is adjustable to any hat.

One important item of a comfortable outfit, for the warmest days, I had nearly forgotten to mention; that is, the wet "head cap," precisely such as is worn by patients at water-cures. Even when working in the shade of trees, it is a relief, and in the sunshine, to me, it is almost indispensable.—Make it of toweling, of a coarse but smooth quality. Cut the top round, and about 4 inches in diameter. Take a strip lengthwise of the material, 3 or 4 inches wide when double, and just long enough to fit around the head; then sew up and gather the upper edges, and sew to the crown.—The whole being double, no raw edges need be exposed. Wet the head, and then put on the cap after wringing it out of cold water. This will make out-door work easy, even to beginners. Of course, it amounts simply to a wet cloth, but as it fits the head, is more convenient, besides covering a larger portion of it.

Whether or not the suit I have recommended should be trimmed is not a matter of necessity, and may properly be left to the option of the wearer; still, I can hardly refrain from making a suggestion in regard to it. It is one of the refinements of civilization to be always as well and appropriately dressed as circumstances will allow; and if the dress is trimmed, at least around the neck, and the under-waist worn with ruche, or collar and pin, the suit will not be less comfortable or convenient, and will look far better.

So dressed, there need be no fear of bees, and we may, without embarrassment, give a cordial welcome to callers in the apiary, or in the parlor. MRS. L. B. BAKER.

Wintering Bees.

READ BEFORE THE MICH. CONVENTION.

Bee-keepers are not agreed upon this subject. A majority of Michigan bee-keepers probably prefer the cellar, and consider it the best. as a winter repository. While friend Townley and others are firmly "wedded to their idol"—chaff.

I have had no experience with chaff; have five colonies in chaff this winter, as my first experiment with chaff. No doubt different methods of wintering may be successful. For several years, I used, as a winter repository, a house constructed with two walls of sawdust, each 8 inches thick, with an air space of 4 inches between, double doors, etc. Taking care to make it as near frost proof as possible without artificial heat, but I lost from 10 to 25 per cent. of my colonies each winter. In a long spell of severe freezing weather, the frost would get through; and yet, when I reflect that during those years there was a cider mill within one-half mile of my apiary, I look with less disfavor upon the sawdust house. In that, the bees would die inside the hive, and many upon the floor; several quarts each week, and towards spring, the amount increased to such an extent that upon setting them out, many colonies would be found so weak that it was impossible to build them up. I then gave out door wintering a trial, and the first winter thoroughly satisfied me of its uncertainty. It resulted in total destruction of my apiary, of about 100 colonies.

Beginning again, I tried the cellar, and have found that much to be preferred to the sawdust house, having succeeded thus far in wintering in my cellars, with a loss of less than 5 per cent. In the cellar the temperature can be controlled, during changeable weather in fall and spring, much better than in a building above the ground; the cool, stone wall aiding materially in maintaining an equal temperature. Also, frost can be more readily excluded than in a building without artificial heat. My cellar is ventilated by means of a 4 inch pipe, reaching within 8 inches of the bottom, in the center of that part occupied by the bees, and connecting with the stove-pipe, leading from the dining room stove. This ventilator is left open most of the time during the winter; and whenever there is a fire in the stove, there is a draft from the bee cellar, and the air is thereby kept pure. Another tube, of like size, enters the cellar just under the house floor, from the woodshed.—This is used in lowering the temperature of the cellar, when too high. By these means, I can keep the temperature nearly to suit the bees.

Last winter they became uneasy when the mercury went above 42°, but this winter they are perfectly quiet with it at 46° to 50°. I also found that moisture gathered on the inside of the hive, unless the honey-board was raised so high as to be disagreeable to them; and I substituted quilts, made of cotton cloth and batting. One pound of cotton batting to each quilt; and find that these quilts allow the moisture to escape, and at the same time prevents any draft through the hive.

I got the quilt idea from A. I. Root, who, although inclined to give too much prominence and space to a *new* thing, yet, has given me more useful hints and practical aid than any other one, during the last few years.

In one of my cellars I am using quilts made of chaff, instead of cotton batting.

In my experimenting, thus far, I have been unable to winter without the loss of *some* bees from every hive; and I am a *little* skeptical when reading accounts of colonies wintering without losing but from "10 to 50 bees each." I wonder if it is not impossible to winter without some bees dying? Surely, there must be some old veterans, who would have been worn out had the honey season lasted but a few days longer. And, can they linger along for 5 or 6 months, and is it any advantage if they should?

I am wintering 5 hives in chaff, packed 6 inches thick on all sides, top and bottom. Can see no advantage over the cellar, as yet. My preference, at present, is a dry cellar, with water-lime bottom, ventilated so as to secure frequent change of air, quilts over frames to allow the escape of moisture.

The cellar must be kept *perfectly* dark, with the temperature at as near 50° fahr. as possible, and above that rather than below. I place white stick candy over frames of any colonies that I suspect are, or may become short of stores. Am using some candy this winter, made of one-sixth flour. 2 or 3 sticks, (pine is good), 6 or 8 inches long and 1 inch square should be laid over the frames, and under the cushions, to enable the bees to pass over the frames to the honey in outside frames; or in lieu of the sticks, holes should be made through the combs, near the center. I am inclined to prefer the entrances nearly closed, say about as is desirable in late fall and early spring. If the cellar is made in an occupied building, the frame work supporting the hives should not connect with the joints, as the constant jarring is to be avoided.

If a large number of colonies are being wintered in a cellar, it is well to remove the dead bees from the cellar bottom every week or two, to avoid the bad air caused by them. It is also advisable to take advantage of any warm weather in January or February, and set them on their summer stands and give them a good fly, and then return them to the cellar. This is said by some to be a severe task; two men will place 100 colonies on their stands and return them to the cellar, in a day. An expense of, say, 3 cents per hive.

I have given, in brief, an account of my method of wintering. There is nothing in it that will benefit most of you, but perhaps some beginners may glean therefrom some benefit; if so, I shall be well paid for the little time used. A. B. Cheney.

Sparta, Mich., Dec. 12, 1877.

Creating a Demand for Honey.

READ BEFORE THE MICH. CONVENTION.

It has been well said that "he, who causes two blades of grass to grow where only one grew before, is a benefactor to his kind;" and equally true is it that he who causes 2 lbs. of honey to be consumed, where only 1 lb. was consumed before, "is a benefactor" to his fellow bee-keepers. The question of "supply and demand" is one of very much importance to all producers, and every man of business will do well to give this question careful study before embarking in any business enterprise. In most pursuits, success may be expected with much more certainty, if it is positive that there is a demand for the thing produced.

There are three general points that every producer should be famillar with, that he may make his business a success. They are:

1. That he should know how to produce, not only a *good* article, but the *very best* in his line.
2. In the absence of a demand, he should know how to create it; and where the demand already exists, he should know how to increase it.
3. He should always be ready to satisfy the demand.

On the first point it is unnecessary to dwell, since nearly every bee-keeper has become awakened to the fact that if he keeps bees at all, he must take pains to post himself concerning the matter of producing a first-class article of honey.

Very many, (though not all), have learned that if they would find sale for their honey, it must be made in small and neat packages, convenient, both for the retailer and the consumer.

The particular shape in which the honey should be stored, must be determined largely by the requirements of the market for which it is intended. Some very good suggestions on this point may be obtained from the report of the National Bee-keepers' Convention, held in October of this year; and no bee-keeper should fail to read this, if he has not already done so.

After a quality of honey is produced, which is both fascinating to the eye and pleasing to the taste, the next thing to look to is the market; and I believe this to be *the* point that most deserves our careful attention, for in no direction are bee-keepers so likely to make mistakes.

The question "how can we best dispose of our honey" should be constantly before our minds. 1. I answer, we should look near home; we should not fail to let our neighbors know what a fine quality of honey we are producing. Any one who has not tried this plan will be surprised on glancing over his books, at the end of the year, to see how much has been disposed of in his own neighborhood, without time or labor in transporting. Besides, there is no way in which public confidence can be gained more rapidly. The neighbors, on seeing the honey in market, will say:—"That honey is very fine. I got some from head quarters, and I find it to be excellent."

Conversing with a member of this association, a year ago, on this subject, he remarked: "I will tell you what we can do with our honey, if we cannot find other market for it, we can load it into our wagons, and sell it to the farmers. The farmers have a remarkable taste for honey." I find this to be true. Many farmers come to me, with measures of different sizes, to get honey for their winter supply. Some say, that they find that extracted honey agrees with them so well; others think it so very nice to take with warm biscuits. Every bee-keeper should avail himself of the opportunity to dispose of extracted honey in this way.—There are many ways in which he may do this. He should ever be ready to show its superior qualities; give the method of extracting it from the comb, and explain wherein it differs from strained honey.—This requires some patience.

Sometimes customers remark: "Ah!—Strained honey." I say: "No sir; not *strained*, but *extracted* honey," showing them the difference. I find it a good plan to always have a little strained honey, so that the customer may see the difference for himself.

The farmer who keeps bees will find it to his advantage to trade honey for work, and other necessaries on the farm. Thus, when he goes to the blacksmith shop, he should see if his blacksmith does not wish extracted honey in exchange for work. He will, almost invariably; and soon the farmer will find the blacksmith in his debt instead of the reverse. The same is true with a good many others who depend on mechanical labor for a living. If they can pay for honey in work, they will feel able to furnish their table with it, while if they had to pay cash. they would feel too poor to afford it. There are a great many things that a farmer can trade for, in this way, that would cost him the cash, and at the same time work off his extracted honey. I have tried this repeatedly and find that it pays well.

Use every means to bring your honey to the notice of the people. I think it a plan well worth adopting, to put a few ounces of fine extracted honey in wide-necked bottles and distribute it gratis in your nearest market. I find it a very good plan to put it in the grocery stores to be sold on commission, describing to the grocer its real merits. In fact, give him something of a training, so that he may have a fair knowledge both of bees and honey. A man, to be a successful honey dealer, should have a knowledge of bee-keeping, take the BEE JOURNAL, be posted in regard to the honey crop, know how honey is made, and if there is really any chance for the bee-keeper to humbug customers.

In putting extracted honey on the market, the bee-keeper should control it. To do this, put a few, fine, sample bottles in the windows, and on the counters of the stores, where people may see and examine them.

It is best not to crowd too much upon the grocer at a time, but leave small quantities, with the understanding that if any candies it will be replaced by fresh bottles. I have tried this in Adrian, Northville, Plymouth and Detroit; and grocers say that almost invariably where a customer uses one bottle, he returns for the second, and thus, after the demand is created, it will increase; and the supply should be kept up through every month in the year. I find that our home demand has been quite good in every month, except April, in which maple syrup seems to takes its place.

The demand for comb honey is greater, and hence, so much skill is not necessary in marketing it. But even in this, many mistakes are made; one of the greatest arising from the undue anxiety of bee-keepers to make large consignments. This has been the cause of the low price of honey during the present season, while in reality there has been a scarcity of good honey. It has been shipped to the large cities, glutting the markets, while the smaller towns have been meagrely supplied. Last season, there was a large surplus in Detroit. The wholesale and commission houses were overstocked, which resulted in the honey being stored in damp places where it absorbed moisture and foul gasses, and in that condition it has, this fall, been offered to the public. In the month of October, I found, in Detroit, that fully half of the honey offered to the public was old, and invariably in bad condition. The honey had leaked over the boxes, and much had candied in the comb. One day, while passing the central market, I noticed two, of the four stalls selling honey, were retailing old honey, at 22 cts. I was informed, by the man selling it, that it was fine, white honey, and had I not known better, I might have believed him. So long as people are thus deceived, it is not strange that there is no greater demand for honey, for when a customer has a piece that resembles tallow more than honey, it will last him a year.

Amongst dealers some very erroneous ideas prevail that should be corrected. In Detroit they have a theory that the bee-keepers feed sugar, and the bees carry it up and store it in the boxes, which every bee-keeper knows can not be done with profit. Still, all the arguments I could produce would not convince to the contrary. They say, they know it is done; that bee-keepers come down from Sanilac and Lapeer counties and purchase sugar by the barrel, to feed their bees. I wish brother bee-keepers of these counties would clear this up. I think there is no work that this convention can do that will be of more importance to the fraternity than to devise some means for preventing honey from being kept over in the wholesale houses. It not only lessens the demand and lowers the price in Detroit and other large cities, but the local markets are effected in proportion.

The honey market, in every locality, can be greatly increased by building up a reputation for honey.

When I went to Northville, two years ago, one of the grocers there told me that he had sold over 300 lbs. the year before, and so far as I could learn, that was about the amount that had been used in the town and country around. But last year our home market required over 1,000 lbs., and this year, over 1,500 ℔s.

This has been done in a town of only 1,000 inhabitants. If Detroit, and every other town in the state, would use honey at the same rate, I think there would be a demand for more bee-keepers, and we might always be sure of finding a ready market, and a good price for every pound of honey produced. All that is necessary to bring this about is for every bee-keeper in Michigan to appoint himself a committee, to work up a good honey market at home, and see that that market is always kept well supplied, never seeking the metropolis until this has been done. W. L. PORTER.

Our Letter Box.

Madison, Ind., Jan. 16, 1878.

"This fall I put up 55 colonies in good condition, and so far, 8 of them have died from no apparent cause, their hives being well filled with honey."

ABIJAH WRIGHT.

Lynville, Iowa, Jan. 21, 1878.

"I put 164 colonies into the cellar to winter, but the weather has been so warm that I had to set them out in December. They are doing finely now." C. F. DILLEY.

Alhambra, Ill., Jan. 9, 1878.

"I could not consent to do without THE AMERICAN BEE JOURNAL. It is so valuable to me that I long for its arrival. I am only a beginner; commenced with 3 colonies, and now have 6 in good condition."

R. D. UTIGER.

Callaway Co., Mo., Jan. 8, 1878.

"I could not well get along without THE BEE JOURNAL. I commenced last spring with 8 colonies in box hives; transferred to Langstroth hives; increased to 26; and got 200 lbs. of extracted honey. I traded for 4, and now have 30. 12 of my weakest are packed in straw and fodder all around. In warm weather I take out the packing in front and let them have a fly."

R. S. TODD.

Jackson, Mich., Jan. 18, 1878.

"If natural combs are used for starters in sections, they should be cut to an even thickness, or they will not fit in a shipping crate. We do it thus: Cut the combs into strips the length of the section, then with a sharp, thin knife cut evenly to about ½ inch wide. We have used considerable of it, and it works to perfection. When we first used comb foundation, our honey was more regular than in the natural comb, but after shearing the latter, we could see no difference. The combs to cut up should be soft, or they will break or crumble up."

JOS. BUTLER.

East Saginaw, Mich., Dec. 15, 1877.

"I commenced in the spring with 20 colonies; increased to 76; sold 16 swarms, leaving 60 colonies in all. Making the account stand thus:

Received, for honey sold		$200 00
“ “ 16 swarms		67 00
Balance of increase, at $5		200 00
		$467 00
Paid for 10 queens	$10 00	
Stuff for boxes	12 80	
“ glassed,	10 75	
Lumber for frames	5 80	
“ “ winter packing	7 00	
American Bee Journal & Gleanings	3 00	$49 35
Profits, net,		$417 65

L. C. WHITING.

Fountaintown, Ind., Jan. 19, 1878.

"I prepared my 10 colonies for winter on their summer stands, protected on the north, south and west sides. They have been flying lively, most of the time, thus far. I fear they will consume all their supplies, though they were well supplied when put up." GEORGE MUTH.

Henry, Ill., Jan. 10, 1878.

"I have 76 colonies in winter quarters; 70 in a cave, and 6 on their summer stands.—The month of December was very warm.—They got too warm and I was in a quandary whether to move them out or not; I never watched the thermometer so closely before. My plan before was to leave the doors open at night, and close them in the morning, to cool the cave and retain the coolness, but the thermometer stood the same at midnight as at mid-day, so I placed ice in the cave, in large cakes, and run the thermometer from 66 down to 50, which made them more quiet. I use the Langstroth hive; this year my bees have paid me "big" for my trouble. I was out on a bee hunt in December; found 2 trees; cut one and got about 100 lbs.; will let the other stand until spring and then transfer."

GEO. POINDEXTER.

Wisconsin, Dec. 31, 1877.

"Last spring I had 7 colonies and sold 2 of them for $12. I hired a man, who knew more about bees than I did, to transfer the other 5 into patent frame hives, of his own invention, paying him $5 for his patent right, and for the hives which I used during the summer, amounting, in all to $27. My 5 swarms increased to 11, 2 of which I sold for $12. Now the account stands thus:

Cr. By	sale of 180 lb box honey at 20 cts.		$36 00
	2 swarms bees sold, at $6		12 00
	9 swarms bees on hand at $6		54 00
			$102 00
Dr. To	5 swarms in the spring, worth $6.	$30 00	
	Transferring, patent right and hives	$27 00—	57 00
	Balance profit		$45 00

Also:

Dr. To time and care.........................$———

Cr. By honey used in the family..................$———

This, I think, would run the total product of honey up to about 250 lbs.

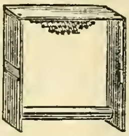
Our honey was extra good this year, being made in the early part of the season, from the white clover and basswood. My stocks are all strong and in good order this fall, and I still think it pays to keep bees."

JOHN RUSTICUS.

Shippingport, Pa., Dec. 22, 1877.

"I had 20 colonies last spring, in Harbison hives, and got 15 young swarms last summer, and had about 800 lbs. of comb honey. I have had 3 colonies of the bright yellow Italian bees, for 3 years, and have got but one drawer of honey from them yet. I have one box hive, (18 years old), that have been hybrids 3 or 4 years, that have made 7 drawers of 12 lbs. each, this summer, and swarmed once, the swarm filling 2 drawers and the box. We have had weather warm enough for bees to fly, for 3 weeks; the dandelions are in bloom like spring, and the bees working on them.—They have been eating their winter stores.

I' would like to see a description of the Harbison sectional honey boxes in THE BEE JOURNAL. JAMES KNOWLES.



[This cut shows one of the Harbison or California Sections. The sides and top piece are 6¼ inches long and 1⅝ inches wide. The sides are 5-16 and top 3-16 thick. The bottom bar is ½ inch square nailed on the angle. The sides have a groove 1-16 inch deep, on the outside (as shown in the cut), to admit of a strip ⅛x1-16 inch to hold the sections together when on the hive.—ED.]

Dixon, Ill., Dec. 25, 1877.

"Two years ago I began with a wild swarm, in a box hive, which I caught on July 4th. They filled their box, and gave 25 lbs. of surplus that season. Last year it increased one. This year the two increased to six and gave me 100 lbs. of surplus. This spring I transferred to a frame hive and allowed one to have its own way. That swarm increased to 3 and gave 60 lbs. of honey. All are doing well."

B. F. PRATT.

Which variety of Mignonette is the best honey plant? What are the comparative merits of Melilot and the ordinary white clover? Will it pay to sow the former where the latter is abundant?

J. N. MCCOHN.

[We could see but little difference in varieties of Mignonette.

Melilot is excellent. Do not think it will pay to sow it where White Clover is plenty. Melilot is a biennial. White Clover an annual. The latter furnishes good hay and feed, so has two uses.—A. J. COOK.]

Milledgeville, Ill., Dec. 24, 1877.

DEAR EDITOR:—"Last season, we gave our bees a flight, one day in February, and then returned them to the cellar, where they were allowed to remain until about April 20, when they were placed on their summer stands, to remain for the season.—I allowed them to remain in winter quarters later than I have ever done before, and the result was very satisfactory. Our cold winds were all over, and the loss from exposure to spring winds was small. We found our hives heavy with honey and brood, and in the best possible condition to gather pollen and honey, which was then being produced by willows, soft maples, etc.—The yield of honey from fruit bloom was small, and so rapidly did our bees breed, that ere raspberries bloomed, most of our stock was short of honey. I supplied their wants by feeding them extracted, candied honey, at the entrance, feeding just before dark. It was really pleasing to see them come out and say "thank you," and then partake of refreshments, which were usually removed during the night. Raspberries, gooseberries, etc., yield a fair amount of honey. The yield from white clover was fair, but not extra. Basswood was a total failure; leaving us a small flow of honey from white clover, until the 2nd crop of red clover, which yielded a fair amount of honey; then followed wild flowers, yielding well, causing brood rearing to continue until the middle of October, giving us strong stocks, with which to go into winter quarters. Our bees were placed in the cellar, Nov. 17, in good condition. At the opening of the season we had 40 stocks; at the close, 60; sold 16 queens, and 2 colonies. Surplus comb honey, 900 lbs; surplus extracted honey, 400 lbs. We have had Italian bees since 1867. Success to the AMERICAN BEE JOURNAL."

F. A. SNELL.

Madison, Ind., Jan. 7, 1878.

"Can you tell me what is the matter with the bees? They are dying, leaving plenty of honey in the hive. There are several bee-keepers in this county that have lost heavily; and they cannot account for it.—The season has not been cold here; indeed, we had a very pleasant winter up to the 1st inst. My bees have done finely, so far. I examined them on Christmas day, and they were in good condition." H. C. WHITE.

[Of course not, with so few data. Symptoms and kind of season should be given. It may be foul brood; may be all old bees; may be bad honey.—A. J. COOK.]

Dorset, N. Y., Jan. 12, 1878.

"I have kept bees in the old-fashioned way for some years; for the last two years, I have adopted the Langstroth hive, two stories, and got an extractor and have been trying to post myself in the science of bee management. I had 18 colonies last spring, in box hives, that were strong; and 20 lbs. of surplus was all that the best of them gave, while my best colonies in Langstroth hives gave 150 lbs., and black bees at that. When I tell my neighbors about taking 150 lbs. from a hive, it makes them stare, but still they can't afford to take the BEE JOURNAL." A. S. SHELDON.

Monroe, Wis., Jan. 4, 1878.

"At the close of the honey season, my bees began to rob, and each seemed to try to rob the other. I lost one weak swarm, and have 8 swarms in fair condition for wintering. During the warm days, the last of December, I set them out on their summer stands; they flew vigorously, but immediately commenced robbing again. How can I prevent them from it? Will they forget it by spring? E. C. GILLETT.

[Contract the entrances so that but one bee can pass at a time. Italians, if strong, always defend their stores successfully.—ED.]

Memphis, Ky., Jan. 20, 1878.

"Three years ago I began with 2 swarms in box hives; increased to 6; lost 2 in spring. That year I increased to 8 and lost 1, queenless. The past year I increased to 17; all are now in good order in their summer stands."

JAMES NEEDHAM.

Indianapolis, Ind., Jan. 1, 1878.

"I have 37 colonies wintering in and out of doors. They are wintering well. I have a good pasture of melilot clover, and about 40 acres of alsike. I find no trouble to sell all the honey I can get. I have kept bees for 55 years, and have not for 45 years been out of honey, and never sold a pound that was not pure. I am glad the JOURNAL got into such good hands. I prize it very highly." W. A. SCHOFIELD.

Henry, Ill., Jan. 8, 1878.

"I have 40 colonies prepared for winter, on their summer stands, with quilts and chaff on the top, under the cap. I never tried wintering in the cellar till last winter, and that was not a success. In the cellar I lost 4 out of 8; out of 30 on their summer stands I lost but 1, and got 2 queenless. I got about 1,500 lbs. of comb honey. I use 4 lb. boxes and sections. I got about as much honey in the sections as by extracting.—We had no honey after Aug. 1st."

JOHN ROBERTS.

Appleton, Wis., Dec. 27, 1877.

"A backward spring and an early drouth cut short our honey crop. In a few localities there were considerable comb honey and increase of stocks, but in our vicinity hardly any increase. We run 60 colonies for the extractor, and about 40 for comb-honey, and got 5,000 lbs. of extracted, and only about 400 lbs. of imperfectly filled combs. Our fall crop was light, although there was quite an amount of buckwheat.—Sickness prevented my giving them the attention I should have, but on Dec. 1st. they were all in good condition."

A. H. HART.

Ripon, Wis., Dec. 17, 1877.

"Our bees went into winter quarters strong, with plenty of honey. Honey is slow sale, and prices low here; small boxes of pure basswood and clover bring only 12 and 15 cts. per lb. The market for good honey is kept down by forcing the poor grades on the shop-keepers at any price; so few people are judges of honey, that our best grades of honey will take its chances with the poorest kind of buckwheat. At present, our part of the state is over-stocked with bees, but old bee-keepers have found that hard winters and poor summers will soon change this state of things."

R. DART.

Independence, Mo., Dec. 22, 1877.

"Bees have not done well in this section. We had too much wet weather through the summer. Linn blossomed very full, but did not yield any honey. Our surplus was all gathered from white clover and spanish needle. I had 18 colonies in the spring, (12 in fair condition, and 6 very weak). I let a neighbor run them on shares; he doubled them, and got 1,300 lbs. of surplus honey; (250 lbs. of extracted, the balance in small boxes), and all the hives are very heavy.—We have about 600 colonies in this town.—The advent of Baldwin Bros. to this place, 3 years ago, gave the bee business a new life. Prior to that, bee men used the "log gum," and told us about "the king bee," but we are progressing. Now, almost all are using improved hives and have Italian queens." C. M. CRANDALL.

Lodi, Wis, Jan. 11, 1878.

"I have 31 good colonies in Langstroth hives and winter in cellar. J. M. PRUYN.

Dundee, Ill., Jan. 7, 1878.

"The binder was duly received. It is indeed a very desirable article. I now have my last year's JOURNALS nicely bound. I prepared my bees for winter on Thanksgiving day, and have 19 strong colonies, with plenty of honey in the cellar. The temperature is about 45 degrees. We hope they will come out all right in the spring."

FAYETTE PERRY.

Lawson, Mo., Dec. 10, 1877.

"Last spring I had 75 colonies in fair condition; increased to 105; extracted 5,000 ℔s., and got 1,200 lbs. of box and frame honey. Hives are all full of golden-rod honey to winter on. I have 2,000 lbs. of extracted honey on hand, yet, that I would like to get 15 cts. per lb. for. This is my first trial with Italians, and I don't like them to extract from, as they are too hard to brush off the combs. I bought an Italian queen from T. G. McGaw, Monmouth, Ill., and raised some 25 queens from her. She gave good satisfaction. My bees gathered most of their honey from white clover and golden-rod. I am wintering my bees on their summer stands. Success to THE AMERICAN BEE JOURNAL."

J. L. SMITH.

Boone Co., Ky., Dec. 31, 1877.

"The weather has continued warmer for a longer period than we ever saw it in winter. My 50 colonies seem to be wintering perfectly. If the business increases everywhere as it does in Boone Co., the sugar panic will be eclipsed shortly. The bee-keeper, who does not take the AMERICAN BEE JOURNAL neglects his own interests sadly. I am always anxious to get it, to see what the "big boys" are doing, and to keep up with the fraternity generally. I have read my back volumes often, and yet they are *so* useful for reference that I would not part with them for twice their cost. I like to see a friendly and brotherly spirit among bee-keepers, and honor and credit given to whom it is due. How shameful for a would-be-somebody to hop up at the tail end of a convention and attempt to deny an honorable and true veteran of his well-earned laurels. Success to the AMERICAN BEE JOURNAL." JNO. T. CONNLEY.

Freeman, Mo., Jan. 1, 1878.

"The honey harvest in this locality has been about one-fourth of a crop—the spring being too cold and wet. In June, I had to feed some, until basswood bloomed. I have had about 3,000 ℔s. of honey. About half each, of extracted and comb. I have sold extracted honey at 15 cts. and comb honey at 20 cts. per lb. I have 148 colonies in good condition for winter, on their summer stands, with flax straw packed around them; two stakes driven into the ground each side, 6 inches from the hives, also on the back, with thin pieces of boards put between the hives and stakes, then the flax straw packed in, the front being left open. The hives are in rows, 6 feet apart each way, fronts to the south. My reserved queens I keep in a room when cold, and when warm, I carry them out to cleanse them." PAUL DUNKEN.

Lincoln, Mo., Dec. 28, 1877.

"Our honey season commenced in August. We extracted 6 bbls, had 600 lbs. of box honey, and then enough to winter on. It is warm and raining, and I think bees are eating more honey than usual."

Mrs. J. W. Dick.

Knoxville, Iowa, Dec. 17, 1877.

"The past season was a poor one. My bees did not swarm, but I divided two that stored enough to last them over winter. I received a beautiful Italian queen from J. Oatman & Co. I am wintering my bees on their summer stands. The weather is warm, and my bees have had a fly every day this week." J. W. Bittenbender.

Erie Co., Pa., Dec. 25, 1877.

"Our bees have done poorly the past season. They wintered in good condition. 70 colonies increased to 125; new swarms were all large at time of swarming, but did not fill up hives as usual, and made very little box honey. Have sold about 800 lbs., realizing from 16 to 20 cts. per lb. We use the black bees, partially hybridized, have no extractor, and permit natural swarming.—The season has been so discouraging that we intend to turn over a new leaf, by adopting the plan given by Herbert A. Burch the coming season. We have no expert bee-men in this county from which to learn, so I am reading up as best I can."

D. Videto.

Jersey Co., Ill., Dec. 29, 1877.

"Bees have not done very well here, this year. It was too wet and cold during fruit and white clover bloom; that being our principal source of supply for surplus honey. I made an average of 52 lbs. of surplus, per hive, and increased 100 per cent.—Have gone into winter quarters with each hive in good condition. I winter on summer stands. I use Armstrong's Centennial Hive, and think it the best hive I ever saw, for all purposes. I think the Bingham smoker ahead of anything in the smoker line. I experimented some with comb-foundation this summer, and think it a success. I could not think of doing without the Journal." H. D. Edwards.

Mears, Ocean Co., Mich, Dec. 19. 1877.

"It seems to me that bee raisers, when they give their yield of honey, would do well to give the size of hive, depth of frame, side or top storing, etc., give the name of their town, county and state. It would have a tendency to settle on a standard hive and frame. I think I hear some say that there would be too many letters to answer. Do not pay any attention to them unless they have a quarter enclosed. I always throw in a 25c. scrip, and have never failed of getting an answer yet. I have 250 swarms, (Italians and hybrids), in two different cellars. My cellars have two rooms each. I think they are better,—keeps them cooler in warm weather, and warmer in cold weather. Expect to keep them in one of the cellars until May 1st. If they loose 1 pint of bees each, through April, they will lose more than that out doors; besides, they will have more honey left to go through the long, cold rains of May. I do not want any swarms before June 5th, rather have them on the 10th."

E. Stanhope.

St. Clair Co., Ill., Dec., 27, 1877.

"I had 53 colonies in good condition in May, of last year; now I have 76. Some of them I expect to have to feed before spring, unless the weather is exceedingly favorable. White clover was plenty, but yielded no honey after June 1st. The surplus that I got was from honey dew, and though dark, I retailed it for 25 cts. per lb., or 5 lbs. for $1. I only got 200 lbs. of extracted, and 30 lbs. of comb honey. I do not think a pound of comb was built this season. I got about enough fall honey to keep them breeding and give them stores for winter."

C. T. Smith.

Smith's Grove, Ky., Dec. 7, 1877.

"I commenced the past season with 40 colonies, having reduced my number by letting 20 die during winter, also by sale of some. I got about 1,200 lbs.—almost equal quantities of extracted and box honey. I made 20 artificial swarms, and had 4 swarm naturally. I doubled my nucleis and balanced the stores of my bees in November, and filled the top story, with dry leaves.—They seem to be doing well on their summer stands." N. P. Allen.

Steele Co., Minn., Dec. 24, 1877.

"The past season was good. I had 19 colonies in an out-door cellar. All came through in good condition. One was queenless. I got 3,000 lbs. of honey, (800 lbs. being comb honey), and increased to 47 colonies. I have sold nearly all my honey in this neighborhood. I began 2 years ago with 8 colonies. That season I got 800 lbs. of honey, and sold it for $38. I have moved my bees to Casswood, 5 miles away, every year. This year I am building a house at Medford, which is surrounded with fine basswood timber. I have 26 stocks in my cellar there, and 21 stocks here. This cellar and house I am building expressly for my bees, and am letting them furnish the capital. The location, house and all will cost upwards of $500. I would not change cold Minnesota for a place in California. We can get about as much honey per stock, and save so much transportation. Honey will be one of the cheapest of sweets in Minn. if we continue to have good success. I am satisfied we must take large quantities and sell cheap, to make a perminent business.—My aim is to get all to use honey, and if cheap enough, we can succeed. People will not use as much of other sweets if they use honey; in this we shall gain an important step, by educating the people that large quantities of honey can be taken from the bees cheaper than it can be made by man from any stuff; that it will granulate; and that there is a difference in kinds; that if you extract basswood honey in a neighborhood where there is no basswood, and where the extractor has never been used, they will say that it is not honey at all, because it does not look like their buckwheat comb honey, etc. Honey peddlers, of course, understand the situation; all of this can and must be overcome, in order to make bee-culture a success. Let every one work up a home market, and if a brother bee-keeper happens to work over on your ground, (as one did on my field), do not be discouraged, but pay him back as I did, for I found his ground as good selling ground as I presume he did mine. Both had been worked up." J. E. Cady.

Ligonier, Pa. Dec. 20, 1877.

"I have 34 colonies in good condition to winter. 25 of them are Italians."

WM. ASHCOM.

Marshall, Texas, Jan. 3, 1878.

"Friend Newman: I congratulate you on the conduct of THE BEE JOURNAL. I consider the last year's numbers far in advance of any of its predecessors."

W. K. MARSHALL.

Carthage, Ind., Dec. 25, 1877.

"Last spring I had 70 colonies and bought 21 late in the season, in Tenn. Got 8,645 lbs of extracted dark honey, and 2400 lbs from my home apiary; in all 11,045 lbs; have sold about one-half of it at 15 cents, net."

P. W. McFATRIDGE.

Dowagiac, Mich., Jan. 5, 1878.

"Our bees are wintering, both out and in doors very nicely so far,—if we can call it winter. It is 32° above zero, night and day, and no frost till within a day or two. Now the snow is 8 inches deep, and it is 4° below zero."

JAMES HEDDON.

Lavansville, Pa., Dec. 29, 1877.

"I have now wintered some in-doors, and some out, for 4 seasons, without losing a single colony, and I am satisfied that I am master of the situation."

H. H. FLICK.

[Let the *master* then have the floor, while we all give close attention. We are all willing to learn "how to do it."—ED.]

Eagle Lake, Minn., Jan. 4, 1878.

"I had 20 good, and 14 weak colonies in the spring—probably enough to make 25 good colonies in all. I have obtained 2,700 lbs. of honey, and have 108 colonies in the cellar, after having sold 4. My bees have 25 lbs. of honey to the hive, on an average. They are all Italian but 1—and that is a Cyprian."

H. A. SIMONDS.

Columbus, Kansas, Jan. 3, 1878.

"I invented and made the so called White Honey Extractor, in 1874. My revolving can is 18x20 inches, and will hold any frame from the Langstroth, down. I use wire cloth for strainers, instead of perforated tin. It is the only extractor that I have ever seen. Its whole cost was less than $5. I commenced keeping bees in 1874; during the first season, I took 400 lbs. of extracted honey; in 1875, 950; in 1876, 2,200; and in 1877, 4,000 lbs. I find a home market for my honey, at 15 and 20 cts. I have now 106 colonies of bees, mostly Italian, in good condition, and on summer stands."

H. SCOVELL.

San Diego, Cal., Dec. 25, 1877.

"The past season, so far as surplus honey is concerned, was a complete failure in this State. The present, beginning with the middle of last month, is to date, as good as could be wished; bees beginning to gather a little honey from manzaneta, a shrub of this coast. In two weeks, flowers will be abundant, though we cannot reasonably expect so large a yield as that of 1866, because the bees generally are not in as good a condition; a number of colonies having died during the past summer."

ROBERT CAMPBELL.

Hennepin, Ill., Dec. 31, 1877.

"I have 225 colonies. The latter part of our season was good for honey. My hives are 10 inches deep and 14 inches long, with 8 frames. I examined my bees Dec. 24, and found on an average 50 lbs. of honey all through. The next cold spell, I will set my bees in the cellar until April 1, 1878. I have shipped, this season, 1437 3 lb. boxes of honey; selling them at from 14 to 17 cts. per pound in Chicago. I kept bees 10 years in Germany, in the Dzierzon hives, and 19 years in this country."

JOHN LEHMAN.

Todd Co., Minn., Dec. 21, 1877.

"If the Javan bee, *Apis dorsata*, is as large as reported, it would be a very valuable addition to our bee family. Mr. Cori says that the Javan bee is large enough to gather honey from red clover. It is well known that the red clover is one of the richest honey plants in the country, and that the honey is of an excellent flavor and color. I believe there is spare cash and enterprise enough, among the bee-keepers of this country, to import the Javan bee direct from Java. Will not those who have been importing bees and queens, give their views through the AMERICAN BEE JOURNAL on the practicability and probable cost of importing bees and queens direct from Java?"

A. J. HANEY.

Nelson, Pa., Dec. 25, 1877.

"I am busy extracting honey.—(How is that for Christmas?) I transfer the combs from box hives, which were "taken up" last fall, and have been in my shop ever since. I let them stand exposed to the warm air for 12 to 24 hours, and then extract them with the transferring slats on, and put the combs away for use next summer. The honey comes out very well after the combs have stood in a warm room for 24 hours, but without that, it will scarcely come out at all; it is very thick. I wish you would give through the JOURNAL the correct pronunciation, definition, and derivation of the word "parthenogenesis." I have been familiar with the word for years, but never having heard it pronounced, I do not know whether I pronounce it correctly or not, and I presume there are many others among your subscribers who are in the same fix.

I am well pleased with the "Dzierzon Theory." It is just what all beginners need, and probably a great many who are not beginners. Accept my best wishes for success."

JNO. ATKINSON.

["Par-the-no-gene-sis."—In the first sylable give the *a* the same sound as in *far*.—The 4th sylable pronounce as though spelled thus: *jinee*—give the last *e* the long sound—and you have the word. It means the production of offspring by the female, without intercourse with a male. It is derived from two Greek words, literally meaning "a virgin production." Minerva (a virgin of ancient mythology) was the goddess of wisdom, war, and the liberal arts; and the celebrated "Temple of Minerva," at Athens, was called the "*Parthenon*"—Temple of a Virgin.

Pronounce Dzierzon, *Dzeert-sohn.*—ED.]

American Bee Journal.

TERMS OF SUBSCRIPTION.

Single subscriber, one year, ...	$2.00
Two subscribers, sent at the same time...	3.50
Three " " " " " " ...	5.00
Six " " " " " " ...	9.00

All larger clubs at the same rate.

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1 month, per line, ...	**20** cents.
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3 " " " " "	**12** "
6 " " " " "	**10** "

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Write names and addresses plain—giving County and State.

When changing post-office address, mention the *old* address as well as the new one.

We send the JOURNAL until an order for discontinuance is received at this office, and arrearages are all paid.

We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

☞ Subscribers will please notice the date upon their subscription labels and see that they are "up with the times."

Additions can be made to clubs at any time, at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application.

☞ When you have a leisure hour of evening, why not drop in on a neighboring family and see if you cannot get a subscriber for THE AMERICAN BEE JOURNAL?

☞ For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, full colonies, Langstroth or other hives, Extractors of all the makes, and anything required about the apiary.

☞ The only *safe* way to send money by mail is to get the letter registered, or procure a money order or draft. We cannot be responsible for money lost, unless these precautions are taken. Then it is at our risk, and if lost we will make it good to the sender, but not otherwise.

We will send a tested Italian queen to any one sending us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. This premium, giving a good queen for four subscribers, will pay any one for taking some trouble to extend the circulation of the JOURNAL. Premium queens will in every case be tested.

North Eastern Bee-Keepers' Ass'n.

The North-Eastern Bee-Keepers' Association will hold its Annual Meeting at the City Hall, Syracuse, N. Y., on the 6th, 7th and 8th of February, 1878. First session at 1 o'clock, P. M., of the 6th.

Papers on important subjects are expected from some of our own members, as well as from eminent apiarists abroad. Among those may be mentioned an essay on "Recently Discovered Parasites of the Honey Bee, and their Connection with Successful Wintering."

The Marketing of Honey will receive special attention, and it is expected that initiatory steps will be taken toward supplying each member of the Association with reliable data of much importance to honey producers. To secure satisfactory results, a full attendance of this class is especially desired. P. H. ELWOOD, Pres't.
J. H. NELLIS, Sec'y.

◆

☞ Strangers wishing to visit our Office and Museum of Implements for the Apiary should take the Madison street-cars, (going west). They pass our door.

◆

☞ On page 9, of January No., Will M. Kellogg's letter gave the location of an apiary at Benton Bay, Miss. It is a location on the Mississippi river four miles north of Oquawka, Ills. The error occurred by our printer omitting the word, "River."

◆

☞ We are asked why we do not put a notice under our advertising pages, asking our readers, when giving an order, to state that they saw the advertisement in THE AMERICAN BEE JOURNAL. There is no necessity for it, as not one of our advertisers is dissatisfied as to the amount of benefit derived from his advertisement; indeed the benefit is so perceptible that there cannot be any doubt upon the subject.

◆

HOW TO WINTER.—Those who wish to post up on the subject of wintering, will do well to read Prof. Cook's essay as read before the National Convention of last year.—It was published in the December number of 1876, and has since been re-published in pamphlet form, with the other essays.—Price 15 cents.

◆

We have gotten up a "Constitution and By-laws," suitable for local Associations, which we can supply with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 is ordered, they will have a blank left for writing in the name of the association, etc. A sample copy will be sent for a 3c. postage stamp.

◆

☞ Many complain of the dearth of small currency, all over the country. In reply to correspondents, we will say that *Postage Stamps*, of any denomination, can be obtained at every country post-office; and we will receive 1, 2 or 3 cent stamps for anything desired from this office.

A False Rumor.

Some evil-disposed persons, it seems, have reported Thurber & Co., of New York, in financial difficulty. As bee-keepers are interested in the soundness of this firm, we give the following article from the *New York Tribune* of Jan. 22, concerning these false reports:

Reports have been in circulation in Wall St., that two prominent grocery houses were financially embarrassed. Yesterday it was rumored that the paper of H. K. & F. B. Thurber & Co., had gone to protest.—Inquiry was made of H. K. Thurber last evening in regard to the matter. He denied in most emphatic tones all rumors detrimental to the credit of his firm. He said:

We keep only one bank account, and that is with the Importers' and Traders' Bank, where I am a stockholder and director. For a week, or more, unfavorable stories have been circulated concerning our financial standing, evidently originating on Wall Street, where there are stock-jobbers, who are trying to create a panic. On Monday, the names of several large grocery houses were coupled with ours, as about to fail. Our firm is abundantly able to meet all its obligations, dollar for dollar, inside of 20 days. The fact is, that instead of being in trouble, we have been discounting our thirty-day bills—particularly sugar accounts. On Thursday, we checked out in this way, $60,000; on Saturday, nearly $80,000; and on Monday, when the stock-jobbers were trying to put us among the broken firms, we discounted current accounts for over $22.00. None of these accounts fall due until February 15, but having more money in the bank than we require, we made the discount. We have not failed, and we are not in trouble in any way; and if all the other houses in the grocery trade should become embarrassed, the firm of H. K. & F. B. Thurber & Co. would still be transacting business as usual.

James Buell, President of the Importers' and Traders' Bank, said that "he had so much confidence in the soundness of Thurber & Co., that he would discount their paper at 7 per cent., to the amount of $100,000. He stated that H. K. Thurber was worth, at least, $1,500,000, and the credit of the firm, of which he was the head, was as good as that of any firm in the country."

E. H. Perkins, jr., Cashier of the Importers' and Traders' bank, said in regard to H. K. & F. B. Thurber & Co.: "For the past 5 or 6 years I have seen their balance sheet, and it always indicated gains of at least $100,000. The monthly sales of the house I know to be over $1,000,000, and the Thurbers have always been noted among grocery men for their short credit system, which has prevented them from incurring any long debts. Besides this, the Thurbers work on a solid foundation, their available assets being, at the very least, $1,500,000.—They always have a considerable sum deposited with us, but I do not know exactly how much there is at present."

☞ A Card.—The last season's trial of Bingham's smoker has demonstrated that it was not only *new* but *useful*. The U. S. Patent Office has reported the same, and granted a patent. Being the *legal* maker of the *direct draft* improvement in smokers, and having received the most flattering reports from all, every effort will be made to keep its merits in workmanship up to its usefulness as an implement in the management of bees. Thanking all my friends for their *kind words* and *consideration*, I remain, &c., T. F. Bingham.

Abronia, Allegan Co.. Mich., Jan. 21, 1878.

Honey Markets.

NEW YORK.—We quote as follows:

HONEY.—Fancy caps, in neat crates, of prime, well-filled combs, white honey, is scarce, and continues in good demand; selling all the way from 20 to 22c. per lb. White honey, in irregular caps and crates, 15 to 20c. Buckwheat, and dark grades, 8 to 12c. Strained honey, in bbls. and firkins, 8 to 12c. per lb. Our quotations are based upon actual sales, during the past month, and we certainly do not wish to be understood as being able to make the prices for the month of February.

There has recently been made, large consignments of dark honey, to this market, and prices have been very much depressed by forced sales. Consequently, we do not wish to encourage shipments of dark honey.

BEESWAX.—Rather dull sales. Quotations, 27½ to 28½c. per lb.

H. K. & F. B. Thurber & Co.

CHICAGO.—We quote as follows:

HONEY.—Prices easy, and range as follows:—Choice white comb, 15 @ 16 per lb; inferior to fair, 10 @ 13c. per lb.

BEESWAX.—Prices nominal, at 21 to 26 per lb for bright yellow, and 15 to 20c. for common to fair.

CINCINNATI.—Quotations by C. F. Muth. Comb honey, in small boxes, 15@20c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz., $4.50; per gross, $50.00.

It must be understood, that goods realize these prices in our market. I buy for cash—not on consignments. I have been paying this season, for choice white clover extracted honey, in bulk, 10c, and 7@8c for Southern, buckwheat, basswood, and dark honey. For choice comb honey, in boxes, I have been paying 16c net; for darker grades proportionately less.

SAN FRANCISCO.—We quote: 10 @ 18 c.

San Francisco, Jan. 14, 1878.—We have no change to note in prices. Have had fine rains in the bee counties, enough to insure a living for the bees and a surplus of honey. Stearns & Smith.

LOUISVILLE.—Quotations by B. B. Barnum.—I will pay for choice, light, extracted honey 8@10c.; for white comb 12½@15c., in small boxes.

☞ Anyone wishing information concerning the ability of Geo. W. Merryatt, of Milton, Wis., (of late near Hebron, Wis.) as a bee-keeper, can obtain it, of those who know him well, upon application at this office.

☞ We have recently received some Russian Sunflower Seed, from E. R. Billings, which he advertises elsewhere in this issue, as a good honey-producer. The seed is very fine.

☞ The Report of the Michigan Agricultural College apiary, for 1877, is crowded out of this issue. It is long but quite interesting, and will appear in our next.

☞ Seeds or samples of merchandise can be mailed for 1 c. per ounce. Printed matter 1 cent for every *two* ounces. *Don't send us any small packages by express, that can be sent by mail.* Express companies have no souls.

☞ In addition to all those who have renewed their subscriptions during the past month—and they are not a few—we have averaged ten *new* subscribers every day since the New Year—thanks to our staunch friends.

THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, MARCH, 1878. No. 3.

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Editor's Table.

☞ Friend Argo (just as we are ready for the press) wants us to insert a letter—but as we cannot find room, at this late date, we will give the gist of it. He has received a host of letters, and neither he, his wife or neighbors could read the signatures to many of the letters. Let every one write names, post office and state plainly.—It will save very great annoyance to those receiving the letters.

☞ We regret to learn that friend R. R. Murphy, of Garden Plain, Ill., lost his beloved wife on Jan. 30, after a long and painful illness. The AMERICAN BEE JOURNAL extends its condolence to the bereaved brother.

☞ To save confusion and disappointment let all who intend to buy hives, honey-boxes, crates, &c., order early. Manufacturers complain of the rush just before swarming season. A little foresight in this will save disappointment and ill-feeling.

☞ Four government vessels are to be dispatched to France with full loads of American "truck" for the Paris exposition. All the space allowed to the United States has been already assigned by the chief commissioner, but the applications are still numerous. American apiculture will be meagerly represented.

☞ A swarm of bees were recently discovered under the eaves of the Congregational Church in Boscawen, N.H., and with 69 lbs. of honey taken from their hiding-place a festival was held which brought the church a large sum.

☞ Friend Palmer has sent one of his double Langstroth hives to our Museum.—Such were recommended by Mr. L. in 1867. Friend Palmer uses them and speaks much to their praise. They are nearly the same as the single, with two entrances and porticos, and more box room. We have known friend Palmer for many years, and as he advertises a new Raspberry in this issue, would say that he is entirely responsible and honorable in his dealings.

☞ Cincinnati has a Poultry and Pet Stock Association. It was organized on February the 14, with the following object: To encourage and promote improvement in the Breeding and Management of Poultry, Pigeons, Bees, Game, and Pet Animals, by means of exhibitions and the collecting and disseminating of reliable and practical information relating thereto. Armin Tenner, is its Secretary.

☞ In *Gleanings* for Feb, Novice states that Wm. Hoge received an order from England (with $100) for comb foundation, and neither filled the order nor refunded the money. In reply to an inquiry, Mr. H. says he received but *one* order from Europe for foundation, and that was duly filled—but the amount was only $5.00. So there is a misunderstanding some where. Novice should either *prove* the charge made so publicly or take it back.

Mr. Hoge took hold of comb foundation when the Weiss machine was idle, and laid by as a useless thing. He worked hard to introduce it, and spent time and money in the endeavor—never receiving enough to reimburse him. Now, others are reaping where he has sown. The panic was too much for him, as it was for thousands of others. He is now working on a salary and devotes a regular sum from it to pay up old scores. When in New York, last fall, he informed us that he would soon be square with the world again. This is as honest and praise-worthy as the statements of Novice are unjust and ungenerous.—Those who are endeavoring to do right in these trying times should receive encouragement—not kicks.

John Long is Mr. Hoge's father-in-law.—He fully approved of the latter doing business in his name, as "agent;" which was printed on their stationary at the time. On our desk is a private letter from Mr. Long, which proves what we state. Two years since, we mentioned Mr. Hoge as "*alias* John Long," supposing it to be correct.—Finding it an error, we cheerfully make the correction, without solicitation on the part of Mr. H. or his friends. Novice will also, of course, make the *amende honorable*.—He evidently took a curent report as a fact, without proof, as we did.

☞ On page 33 of the February No., we said:

> "Those who *use* an infringment of a patented article, are liable to the law, as well as the manufacturer and the vendor of such articles. All should therefore be careful, and not "burn their fingers" by purchasing or using an infringment. Better to throw them into the fire than get into trouble about such a small matter."

Some have interpreted this to mean, that we advised all having Novice's Smokers to burn them up. By reading the paragraph again, we think *all* can see our meaning—that it would be better to burn the article than "burn your fingers" in a law-suit.

ADULTERATION OF HONEY.—A California paper has the following item:

> Assemblyman Waters of San Bernardino, Cal., has introduced a bill into the Legislature, amending the Penal Code by adding a new section concerning the sale of spurious honey. Every person who either sells, exposes or offers for sale, any artificial or spurious honey, as and for genuine or pure honey, is guilty of a misdemeanor.

Such a law should be in force in every State in the Union. Adulterators have no rights that honest men should be asked to respect. Set the ball in motion in every State and Territory.

☞ Friend Muth has sent us one of his Shipping Crates for comb honey. It is 14½x16½ inches, and 12 inches deep, outside, and is substantial, neat and cheap. It holds 4 cases, each containing 8 small frames, 5½x6 inches, outside. Friend M. says they can be furnished for $18 per 100, ready to nail. The cases are intended to be placed on the top of the frames—two of them just filling the width of a Langstroth hive, but they are 4 inches short, the other way,—though they could be made long enough to fill, if the length, 19½ inches, would not be objectionable. We must say that we prefer the Prize Crate, which holds a dozen boxes or frames, as desired, and is of convenient size every way. We have pleasure in adding it to our Museum.

☞ We have received a model of a new "hiver," from F. R. Davis, Noble Co., Ind.—one that he has just invented. He says that he intends to give it a good trial this season, and report its practical value. We have added it to our Museum.

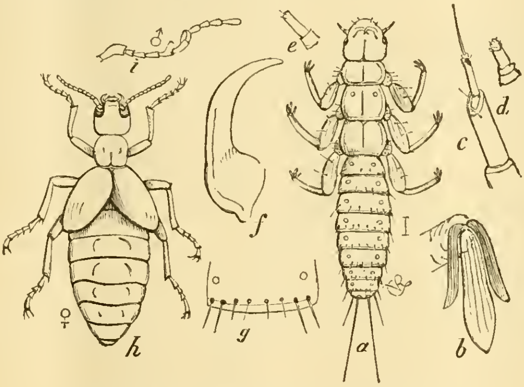
☞ The *Bee Keepers' Magazine* for Feb. appeared with a newly-engraved cover, and *Gleanings in Bee Culture* also came to hand with many illustrations and 8 extra pages. We are glad to note these evidences of prosperity.

CATNIP SEED should be sown very thick, in March, on good garden soil. Plants blossom the first season, but it requires two years to give them full bloom. In the fall, cover the plants slightly with rubbish, to prevent the frost from throwing them out of the ground. In the spring, set the plants out 3½ ft. apart each way, and cultivate like corn. Two years ago, in many localities, all sources of honey failed but Catnip. Those who wish to sow this honey-producing seed should procure and sow it at once. We can supply a few pounds at $2 per ℔.

Curious History of the Oil-Beetle.

In a most interesting paper on the larval habits of the Blister beetles, in the Transactions of the St. Louis Academy of Science, Prof. C. V. Riley thus speaks of the bee-parasitism of the Oil-Beetle:

It is generally stated by writers on the Hive-bee that the Oil-Beetle (*Meloe*) is one of its parasites. The possibility that our more common blister-beetles were similarly parasitic on bees, taken in connection with the frequent complaints from apiarists of the wholesale death of bees, from causes little understood, led me, some years since, to pay attention to the biological characteristics of the blister-beetles, in the hope of ascertaining whether or not they really bear any connection with bee mortality. From these investigations I am satisfied that *Meloe* is only parasitic on the perfect Hive-bee as it is on so many other winged insects that frequent flowers; and that it cannot well, in the nature of the case, breed in the cells of any social bee, whose young are fed by nurses in open cells.



MELOE:—*a*, first larva; *b*, claws; *c*, antenna; *d*, maxillary palpus; *e*, labial palpus; *f*, mandible; *g*, an abdominal joint; *h*, imago; *i*, antenna.

The history of *Meloe* may be briefly summed up as follows: The newly hatched, or first larva, (now generally called *triungulin*), was first mentioned in 1700 by the Holland entomologist Gœdart, who hatched it from the egg. Frisch and Reaumur both mistook it for a louse, peculiar to bees and flies. De Geer, who also obtained it from the egg, mentions it in 1775 as a parasite of Hymenoptera. Linnæus called what is evidently the same thing, *Pediculus apis*; Kirby, in 1802, described it as *Pediculus melittæ*, and Dufour, in 1828 named it *Triungulinus andrenetarum*. Newport, in 1845, (*Trans. Linn. Soc.*, vol. xx, p. 297), first rightly concluded that it was carried into the nests of bees, and described, in addition, the full-grown larva from exuvial characters, and the coarctate larva and pupa, which he found in the cells of *Anthophora retusa*. He failed, however, to fill the gap between the first and full-grown larva; and this Fabre first inferentially did in 1858, (*Ann. d. Sc. Nat. Zool.* t. ix. p. 205), by tracing the analogous stages of *Sitaris*.

The female *Meloe* is very prolific.—She lays at three or four different intervals, in loose, irregular masses in the ground, and may produce from three to four thousand eggs. These are soft, whitish, cylindrical, and rounded at each end. They give birth to the triungulins, which, a few days after hatching—the number depending on the temperature—run actively about, and climb on to Composite, Ranunculaceous and other flowers, from which they attach themselves to bees and flies that visit the flowers. Fastening alike to many hairy Diptera and to Hymenoptera, which can be of little or no service to them, many are doomed to perish, and only the few fortunate ones are carried to the proper cells of some *Anthophora*. Once in the cell, the triungulin falls upon the bee egg, which it soon exhausts. A molt then takes place and the second larva is produced. Clumsy, and with locomotive power reduced to a minimum, this second larva devours the thickened honey stored up for the bee larva. It then changes to the pseudo-pupa, with the skin of the second larva only partially shed; then to a third larva within the partially rent pseudo-pupal skin, and finally to the true pupa and imago.—These different changes of form are known by the name of hypermetamorphoses, the term first given them by Fabre, to distinguish them from the normal changes from larva to pupa and imago, experienced by insects generally. The triungulin or first larva (*a* in cut) is characterized by a prominent labrum, very stout thighs, unarmed shanks, three broad and subspatulate tarsal claws, feeble and reduced trophi, untoothed jaws, 3-jointed antennæ, ending in a long seta, and four anal setæ, the two inner ones longest.—When the abdomen is shrunken, the general aspect is very much that of *Pediculus*, and it is hardly surprising that some of the early describers so determined it.

The Crystal Honey Fraud.

Friend J. E. Moore, of New York, has sent us a hand-bill puffing this vile trash. It is the same that has been "exposed" many times, under different names. This time, one Chidester, hailing from Fulton St., N. Y., is trying to do a *wholesale* business in the sale of Family, County and State Rights for the Recipe to make it.

The circular states that Honey is a staple and in great demand. With this Recipe, which can be filled by any druggist, it can be sold at a low price, and yet the agent can make more money than at any honorable business. 100 ℔s of Honey(?) can be made in half an hour, at a cost of 10c. per ℔., and can be sold for 25 cents per ℔.!!! How *cheap* that is, when the genuine article can be bought for less money.

The circular proceeds to work out *on paper*, the profits, and concludes with $1500.00 as profit to the agent on 10,000 pounds.

Then the recipes can be sold at $1.00 each, to a million families, who will thus be gulled out of $1,000.000 for nothing but a receipt to make a vile compound—*called* Crystal Honey. The agent can get 500 of these recipes for $25 and have a $30 watch thrown in!!

Exclusive rights for large cities (where those reside who know but little about the production of genuine honey), are sold at *special* rates! Of course! Why not?

To cap the climax of *fraud*, these scamps print a "testimonial from M. C. Quimby," which is intended to convey the idea that the late "M. Quinby," of New York, approved of this swindle. The whole is an outrage on honesty, and a libel on common intelligence!

Chidester also deals in bogus Jewelry, Magic goods, Floral Decorations, a beautifully engraved dollar plate of "The Lord's Prayer," which he sells to agents for $15.00 per 100, and Palestine Crosses from Lebanon and the Mount of Olives, and any amount of *cant*. A good wind up for such a huge fraud!

It is a *trite* remark, but very full of truth, that "when you see a great deal of virtue displayed in the store window, you may depend upon it that the Stock within is exceedingly meagre." Truly, Chidester's case is no exception to the general rule.

☞ We are hard at work on Prof. Cook's new book on the Apiary, and can assure our readers that it is exceedingly interesting. It contains facts and principles not to be found in any other work yet published, and these are just the things, too, to make apiarists more successful. It is profusely illustrated with cuts, engraved expressly for this work; and, when completed, it will be the most valuable work ever placed within the reach of those who wish to conduct the apiary on scientific principles, and as a reward for their labors expect a good yield of marketable honey.

HONEY JAR LABELS.—To make a good paste, follow this receipt: Dextrine, 2 ounces; acetic acid, 4 drachms; alcohol, 4 drachms; water, 2½ ounces.—Mix the dextrine, acetic acid and water, stirring until thoroughly mixed; then add alcohol. For attaching labels to tin, first rub the surface with a mixture of muratic acid and alcohol; then apply the label with a very thin coating of the paste, and it will adhere almost as well as on glass.

Letter from Bohemia, Austria.

Herr R. Mayerhœffer, editor of the *Bienenvater*, in Prague, Austria, in a recent letter remarks as follows:

> "It gave me great pleasure to read the Proceedings of the National Convention of Bee-keepers, held in New York, last fall, as reported in THE AMERICAN BEE JOURNAL. I shall translate many of the speeches for the *Bienenvater*. I follow with great interest the progress of American apiculture, and endeavor to make its details advantageous to our German bee-keepers, and I am sure that they fully appreciate my endeavors.
>
> "In 1879, the Congress of German and Austrian Bee-keepers will be held at Prague. At this early day, I invite you in the kindest and most cordial manner not to fail to make us a visit at that time, and take part in our deliberations."

Brother Mayerhœffer will please accept our thanks for the cordial invitation. If it comes within the range of possibilities, we shall be most happy to avail ourselves of the pleasure of such a treat, but fear it will not be possible to leave our duties so long.—Perhaps the National Convention, when it meets this fall, may conclude to send a delegate to the German and Austrian Congress; if so, the same will be stated in its Report.

Honey Prospect in California.

Our readers will be interested in the following letter from friend J. S. Harbison, in relation to the prospects for a honey crop there this year:

> We have 6.02 in. rain for this season, to date. In the bee range the quantity is, perhaps, 1 inch greater in some localities, a little less in others. It has fallen in gentle showers and all counts for good. Should we have a further addition of, say, 4 or 5 inches, we can safely count on a good, average bee season. I think, however, in no event can there be as large an aggregate crop of honey as was produced in 1876.
>
> Two reasons may be given for this conclusion. 1st. Bees are mostly weak in numbers; not, in my opinion, being as numerous, collectively, as in the spring of 1876. 2nd. Some of the "*semi-shrubs*," heretofore relied on for honey, are seriously injured, or *totally killed* by the drought, and can only be restored from seed,—requiring from 1 to 2 years' growth before affording bloom. In short, it will require one good season to fetch the vegetation to a normal condition.
>
> The season is late; bees are only now commencing brood, and as I have left them, as far as possible, in quiet, thus far, I cannot give any correct idea as to the number living, or the condition they are in.
>
> We will commence active work as soon as the weather clears and gets warm. J. S. HARBISON.
>
> San Diego, Cal., Jan, 19, 1878.

Friend F. C. Hazen, Anaheim, Cal., under date of Jan. 10, 1878, writes:

> "So far, it has been dry here, and bids fair to be a *dry year*; if so, but very little honey will be produced this season. About one-third of all the bees here died last year, and if we get rain, we shall only harvest one-third of a crop."

On February 15, a severe storm and heavy rains were reported from San Francisco, doing an immense amount of damage. So, between a severe drouth last year and too much water this year, the outlook in California is anything but encouraging.

◆

THE ROBERTS HIVE.—We have just added to our Museum a hive, manufactured by John Roberts, Henry, Ill. It is a modification of the Langstroth, with division boards, portable portico, slanting alighting board, loose bottom board and several other items of change. It is well made, and nicely painted; and its construction shows that friend Roberts is thoroughly familiar with the habits of the bee, having kept bees for 20 years. He has had experience with the Langstroth, Quinby, American and Cottage hives, but considers this an improvement on them all. He uses it to winter on summer stands, shielding only from the north and west winds, contracting by division boards to a few frames, and packing chaff or straw, as well as having a chaff-box on top so filled.—For out-door wintering, it is doubtless a good hive.

The Smoker Question.

DEAR EDITOR.—On page 31, Feb. No., you state that the Bingham Smoker is not a copy of the Quinby, but is "original in construction and design," especially in "its internal arrangements." Is not the "direct draft" the only thing *original* in it? Is it not a copy of the Quinby in everything else? Please answer in the next issue. QUIZ.

Quiz is quite inquisitive. We dislike invidious comparisons, and shall not make such in this answer—aiming only to give the simple facts.

As the Bingham Smoker is in every part designed for, as well as adapted to the "direct draft" principle, it cannot be a copy of one whose construction is not adapted to that end. Among the dissimilarities we note the following:

The Quinby has a small, long tube, with a loose wire grate; the Bingham has one, *short* and *wide*, with a perforated *iron* fire-grate.

The former has a spiral spring; the latter two long *flat* springs.

The former has two loose, metal valves; the latter one tight, *spring* valve.

The former has a long, thick bellows, with a diaphragm; the latter a thin, square bellows, with *no* diaphragm.

The former has arms of tin to hold the tube to the bellows; the latter is held by a *block* of oak.

The former has a sharp, thin joint, strained with every motion; the latter a *long, wide* joint, and remains almost motionless.

The question now is, *Where is the similarity?* Our statement in the February issue was that "the upright bellows and tube in form bore some resemblance," but in no other respect are they similar. Can Quiz find any other resemblance?

☞ Chas. Hastings, of Carlville, Pa., says he has a new plan for holding foundation. He says, "I call it the convex wedge slot; thus V 1½ inch at surface, and ⅛ inch deep. This form holds it so much better than a saw kerf. A little resin put into the dipping wax will be beneficial. No patent."

☞ J. Oatman & Co's new Price List is on our table, quoting figures for this season's operations. They are good men to deal with, so far as we have ever heard, and have a large advertisement in this issue.

☞ In J. E. Cady's letter, on page 57, Feb. No., read "I got 700 lbs. of honey and sold it for $138.

☞ Sixteen extra pages in this month's JOURNAL, and yet, for want of room, many interesting Letters and Communications, prepared for this issue, are crowded out!!—The proceedings of the North-Eastern Convention did not come to hand till the 23d, and then, in order to give it room, two whole departments—Marketing, and Notes and Queries—had to be omitted!

We are in the midst of a great *Revival;* thousands of bee-keepers, many of them hitherto belonging to the class styled slovenly, being convinced of the folly of that course, have made up their minds hereafter to work scientifically. "Old things are passing away," and out of the chaos is emerging "the new order of things"—the *new heaven* of intelligence, and the *new earth* of practical and scientific work!

The breezes of this consternation have already reached the consumers, who are turning their attention to the value of honey, as a medicine. Anciently its healing powers were acknowledged everywhere—but of late, people have, in its stead, been swallowing death-dealing drugs by wholesale. This *Revival* promises to reinstate Honey in its proper place, as Nature's remedy, pure and simple, for diseases of the chest, lungs and stomach, as well as for healing wounds, bruises, etc.

As the JOURNAL presents the old, as well as the new converts, an opportunity of "telling their experiences," it must enlarge its borders, as occasion may require, even if it takes sixteen extra pages, each month, to accommodate them.

The April number promises a *rich feast* in every department. Our readers having greatly increased since the new year, our energy and courage is correspondingly increased, and we, renewedly, devote our attention alike to producer and consumer—believing that their interests are identical.

☞ Henry Alley, of Mass., and N. Cameron, of Mo., say that they have, for years, sent queens by mail, with a written letter, paying letter postage on the package.—When letter postage is paid on a package, the contents being unknown to the Post Master, he is under obligation to forward it—and so they say they have had no trouble about sending queens by mail. This evades the *letter* of the law, but without further light on the Postal law, we could not recommend its general adoption. We shall investigate the new law about to be passed, as soon as we get a copy of it, and report in the next JOURNAL.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

Sketches from Tennessee.

POLLEN STIMULATES.

We want strong stocks of bees early, to secure good yields of honey; and to secure such stocks, it is necessary to begin operations in the apiary early.—It appears to be the generally received opinion, that bees rear their brood in proportion to the amount of honey they are gathering, and many bee-keepers, who wish to stimulate their queens to early action, even with plenty of honey in the hives, resort to feeding on liquid sweets. Is there not a misconception as to the wants of the bees in such feeding, and is it not pollen, or some substitute for it, that is required to reach the end desired? We frequently find, during a great flow of honey, when the gathering of pollen is almost wholly suspended, comparatively, a small amount of eggs and brood, but so soon as the flow of honey begins to subside, and the bees are again gathering pollen freely, the queen is stimulated to great activity; filling, in many instances, all the unoccupied space in both apartments to the hive with brood, and with a normal colony, will be kept so until these conditions are frustrated. The reason is obvious. The queen oviposites but sparingly, except when the hive is supplied with plenty of pollen. It follows, as a consequence, that the bees supply her, as well as the young bees, with food, principally prepared from pollen. This accounts for the eagerness with which bees gather pollen at the approach of warm weather, and if natural pollen cannot be obtained, for the avidity with which they take any substitute accessible to them.

REPORT.

We began the season of 1877 with 36 colonies, mostly weakly ones, and increased, by artificial swarming, to 92. The linden harvest being a failure, our honey crop was light; though from a single colony we obtained 232 ℔s. of honey.

Our greatest increase from a single colony was 8, which are now all in a fair condition. Have lost 2, up to this time, for want of attention at the proper time. After disposing of some and uniting others, we have 79, with prospects of safely carrying them through. S. D. McLEAN.

[Right glad, friend McLean, to welcome you to our "Southern" department. Here's our ☞ and may we have the pleasure of frequently griping it. Our old friend Moon has fallen in line, and gives us an occasional item; now, you have stepped in. Will not some more of the old *World* family give a greeting? Why not have a reunion of that old family in these columns?—Come, Dixie friends, let's hear from you!—W. J. A.]

Muth's Shipping Crate.

FRIEND ANDREWS:—Your favor of December 20, 1877 came to hand in due time. Also your comb-guide. It seems to be, of late, the general disposition of our friends, to improve on the style of their comb honey; and it is very essential, also, that comb honey should arrive at its destination in as good style as it is shipped from home. Our friends use, generally, too large boxes; boxes which are calculated for two men to handle, but which are often handled by one man only, who works the boxes along on their corners and breaks most of the combs. Much to the dissatisfaction of the dealer and producer. Several very good shipping boxes were exhibited at the Convention in New York. Still there is room for improvement. The frames, or sections should be no smaller than to hold 1½ to 2 ℔s. of honey; because, we can sell, just as readily, 2 ℔s. of honey in a frame as 1 ℔; and we can produce more honey in larger frames, because the finishing part occupies the bees, apparently, the longest time. The shipping cases should be neat, substantial and cheap. They should hold no more than about 50 or 60 ℔s. of honey, and a handle should be on each side, towards the upper half of the case, which prevents those baggage-smashers from setting the cases down on a corner.—The honey should also be seen behind the glasses of the section boxes, and at a safe distance from the outside.

I have sent you one of my shipping cases, with 4 sectional boxes, as a sample. Imagine, if you please, those empty sections to be filled nicely with comb honey, and tell us through the JOURNAL, whether my shipping boxes find your appreciation, or, what objection you have to them, and oblige.

CHAS. F. MUTH.

[The shipping box and frames came duly to hand. Thanks. We certainly think they will answer the purpose fully, and possess the merit of being cheap. Hoge's carrier is quite expensive. We are of the opinion, friend Muth, that your carrier would answer the purpose still better, if constructed to carry 16, instead of 32 sections. It is true, that it would add somewhat more to the expense of getting it up, but we think this would be more than counterbalanced in their being so much lighter, thereby insuring more safe handling.—W. J. A.]

Correspondence.

For the American Bee Journal.

Trouble.

Novice, under the above heading in *Gleanings*, page 61, February number, says that "two of our bee family" (Doolittle and Betsinger) "have got into a quarrel." We wish to say that this is *not true*, as Betsinger and Doolittle have *never* quarreled.

There is a difference of opinion between B. and myself in regard to the medal, to be sure; yet, this does not necessitate a quarrel, by any means! We have, however, two very unkind and unchristian letters in our possession from Novice, in which he accuses us of being a hypocrite, and trying to injure our friend Betsinger.

Novice also tells us in the same article, that "a number of our bee-keepers put in $7.00 each, and then one draws the whole, or at least $50.00 of it," &c. This is the first we ever heard of such a thing, and is *wholly untrue*, as far as we are concerned; and as we received the medal, we think we would have been called upon for the $7.00, if any one was to pay it.

Next, he says that Doolittle and Betsinger were to go in partnership for the medal, and if they took it, Betsinger was to have the credit for the box and Doolittle for the honey. This is as *untrue* as the other statements. Each of us, B. and ourselves, made crates to compete for the medal, while B. told Mr. Hoge at the time we sold our honey to Thurber & Co., that *he* should certainly get it, as no one had honey that would compare with his. Later, B. said to us (that is my better-half and myself) that he did not care which of us got the medal, as long as it was awarded on the boxes we used. He also made this statement to Mr. Hoge while we were in New York City, after my case of honey was stolen; that was all that was ever said in the matter between us.

Then, Novice says that "another case was selected from the lot of honey that Thurber & Co. purchased of Mr. D., and the medal was awarded to it," when the judges say it was not awarded "to any one crate of an exhibit, but that they considered the boxes of honey put into the fancy crate by Mr. Doolittle as excelling all others on exhibition!"

Messrs. Thurber & Co. also wrote me, soon after the medal was awarded, that they had christened our *fancy crate* the "Gold Medal Honey."

Novice next states that "black bees will, without question, make whiter-looking honey than the Italians." We have had several letters since the National Convention, stating that the honey in our fancy crate was the whitest and nicest honey on exhibition, and the nicest they ever saw; besides what the judges say. We can prove to any one caring to investigate, that we have had no black bees for five years.

Novice next says that "Mr. D. accuses Betsinger of having known of the blunder before the award, and of keeping still purposely." The truth is, we wrote Novice just the words a friend wrote us in the matter, leaving him to draw his own conclusions. We may have said it looked as though B. knew all about it before the award, or something to that intent.

Then, Novice tells us that "Betsinger stated truthfully that it was made by black bees." This cannot be so, for even Mr. Ranney's bees are mostly Italians and hybrids.

Next, Novice says we "made a most *desperate* effort to make it appear that the honey in question was not Ranney's, but our own, after all." Betsinger told me the second time I saw him after the Convention, that if I would send him either Ranney's honey statement or my own, he would prove the medal was awarded on crate No. 2 of Mr. Ranney's honey, and said I *dare* not send him either statement! To prove his knowledge in the matter, I sent him Ranney's statement purporting to be ours, and ours purporting to be Mr. Ranney's, and this was the "desperate effort" Novice alludes to, We were soon convinced we had not done right in thus *intending* to deceive Betsinger, even although he dared us to send him either statement; no matter which. So we sat down and wrote him, acknowledging our wrong, and asking his forgiveness, and soon had a letter from him saying he forgave it.

Next, Novice says, "Here is a copy of the statement sent the *Magazine*, knowing the the full facts as I have given them." We knew nothing of Betsinger's claim when we wrote the statement to the A. B. J. and B. K. M., and Novice had our letters in his possession telling him that no claim had been made of the medal being awarded on Mr. Ranney's honey when we made those two statements! And now he tells his readers that *we knew the full facts*, as he has given them!

Novice has a great deal to say about Satan, but a friend thinks if Satan had anything to do in the matter, that he must have certainly set the type for that article entitled "Trouble," for Novice could not have departed so far from truthfulness without his help. Now, we demand that Novice humbly acknowledges he has done wrong in this matter (no *if* I have done wrong in this matter; for he *knows* he has done wrong); or else tell his readers that all his boasted goodness, in *Gleanings*, is a *sham!*

G. M. DOOLITTLE.

Borodino, N. Y., Feb. 12, 1878.

For the American Bee Journal.

Patents and Smokers.

Dear Editor:—Although exceedingly busy, I feel that I must send a word to the Journal on the subject of patents and smokers, as the welfare of our fraternity is in jeopardy; as also the rights of some of our most enterprising brothers.

I think that many people—and from the last Journal I think this includes you, Mr. Editor—are in error on the patent question. Suppose a man has inventive genius, and then works day after day—yes, and night after night, to give us some valuable implement or machine, and thus aids us all, is he to be robbed of his *hard earnings*?—I think common morality, certainly a genuine, enlightened christianity will pronounce an emphatic—*No*. "Render to every man according to his due." Were I the inventor of, say, so unique, so neat, so perfect and so desirable an instrument as the Bingham smoker, I should feel that it was as much mine as my colonies of bees, and that he who should make it without my permit, as much a thief as though he took my bees or honey. If my property and generosity would permit me to give it to bee-keepers, then, surely, I should be worthy of much praise. But, if I was unable to do this, if I was poor and had a family, in which case I should be in duty bound to retain the right to a reasonable profit; and, if I did not think this would be granted by bee-keepers, I should certainly be excusable—nay, in honor bound to procure a patent, to protect me.

Again, *pride* and *generosity* might also tempt me to secure a patent. I should feel proud of my invention, and should want its style, finish and durability to honor the hard thought and long experiments, which it had received from me. I should also desire to save my brothers the evil of cheap imitations, and thus should wish to monopolize or control the manufacture, from motives of pure charity.

Again, Mr. Editor, if such rights are not to be secured or respected, what motive have men to strive to create these improvements, or, if each patentee is to be put to the expense of litigation, then we shall have to pay just so much more, and ought to.

I believe that had Mr. Langstroth's undoubted right to the movable frames been respected, bee-keepers would have been much better off, the money spent on worthless hives much less, while humbugging patent vendors would have plied a much less lucrative vocation.

Let us urge our people to caution, to look before they leap; never to purchase a patent till they know that it is valuable and needed. And let us stay this unkind, and unwise railing at patents or patentees.—The honest man, to be consistent, must do this, or else give up the use of all improvements.

WHAT, THEN, IS OUR DUTY TO SMOKERS?

Mr. Quinby brought to our attention the bellows combined with the tube, which had been previously in use, though I dare say he did not know it. He got no patent, and so said, "all use it." Let us honor him for the gift. His generosity was respected.—His smokers were not made by others, hence the price was kept up, and we are benefited by having well made smokers.

Mr. Bingham invents an improvement—not, as I once ignorantly stated, "essentially the same as the Quinby." The bellows, (I have taken them all apart), the tube, the valves, and the form are all much superior. It fact, in finish it is certainly admirable.

He did not patent for a time; and see, we have already a cheap, poorly-made imitation, not to be compared with the original, and yet, costing half as much. Now I am sure that bee-keepers will agree with me in the desire to have the best smokers with the best material, just as Mr. Bingham uses.

I believe the good of bee-keepers demands that Mr. Bingham's patent be respected; and I believe, too, that he should not be forced to contest the case in law. Such litigation will trouble all invention and raise prices.

For the good of bee-keepers, for justice, and morality, I hope no one will be disposed to contest the matter. Should I be mistaken, I hope bee-keepers will make common cause, and come to Mr. Bingham's aid. I write this solely on the ground of right.—I have no interest, only that right and justice prevail. A. J. Cook.

[Bro. Cook very frankly says he thinks us in error about patents. Perhaps so; we remarked that "we should have preferred that this invention (Bingham's smoker) might *not* have been covered by a patent." These are our sentiments still—it entails considerable expense, which finally comes out of those who use them. We do not dispute the right—only the desirability.—We do not say but that there is a good argument on the other side; that if the Langstroth hive patent had been respected, it might have been much better for bee-keepers in general,—but it certainly would have been much pleasanter in this case. We do not believe in stealing a man's pocket-book, reputation nor invention,—for "honesty *is* the best policy," at *all times*. —Ed.]

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For the American Bee Journal.

Hard Times.

Mr. Editor.—I have noticed a peculiar feature in the reduction of the price of honey hoping to increase the demand.

Times are *hard* for one class because they are *easy* for another class. In my home market these two classes embrace nearly all of our population.

The poor are *too poor* to afford honey at even $1.00 per gallon. The other class will buy just as much at 15c. per lb. as they would at half that price. Hadn't we better consider these points carefully before we reduce prices? I often sell extracted honey to poor people with children (who ought to have honey to eat) for 8 and 10c. per lb. I also give away from $20 to $40 worth every year. In reply to J. H. Martin, Novice says: "We should rejoice if honey should go down to 5c. per lb."...."Can't we be happy in seeing others made happy?" &c. Now, Novice, you will make many persons who indulge in "tea-kettle feeders," "the smoker we prefer," &c., very "happy," if you will reduce your price-list of "surplus" one-half. Don't say you "can't afford it," as that plea applies with equal force to the producing class, and does not disprove your assertion that others would be made happy thereby.

Now, friend Novice, I want to ask you some questions, and as you are "too busy to stop to answer private correspondence," and others would like to hear your explanation, I will ask you through the JOURNAL the following:

If you didn't owe Mr. Burch $50, why did you pay him that amount?

If you did owe him, why did you not owe R. S. Becktell; and if you did owe R. S. B., why did you not pay him? He says he sent in a claim and found the "bank closed."

Did not the "new light" light up your sanctum sufficiently for you to see that you were appropriating Mr. Bingham's invention in smokers, compelling him to protect himself by law, and us who use his valuable invention, to foot the bill? Have you not injured Mr. B. or the producers, or both—for the gain of a *very few* dollars!

HONEY BOXES AND SECTIONS.

MR. EDITOR: Since my letter appeared in the report of the Michigan Convention, I have received letters inquiring about the honey boxes, sections and shipping-case therein referred to. As many may prefer to make the case at home, I will here describe it. As I use *low* sections and boxes, of course I pack two tiers in a case; for experience has taught me that when so packed, the honey carries just as safely and cleanly, and the case shows the honey better, and is much cheaper per capacity.

I use these cases for both glassed boxes and unglassed sections. Its dimensions are 12¼ long, 10¼ wide and 9⅝ inches high, inside measure; ends ⅝, cover and bottom ⅜, side strips ½ inch. This case goes together just like the prize crate, only it is higher and has a centre side piece. The top and bottom are wide enough to come out flush with the outside of side-pieces, and I handle it by the side top-pieces, instead of slots in the ends, as I like to handle all cases at the *side* of the combs. I don't know which way is best.

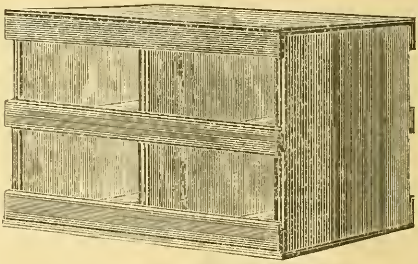
The top and bottom side-pieces are rabbeted ⅛x3-16 on one inside corner, and the centre-piece on both inside corners. When I pack sections, without glass, I slip in two panes of glass on each side, each 3x13½ inches, and brad fast at each end.

In shipping-boxes I omit the glass. I make them neat, smooth and cheap; *not to be returned.* I prefer a little play between the boxes and case, to aid the connection between the comb and box to keep its solidity.

This case takes 20 sections 4½x6⅜, weighing about 1½ lbs. each, packed in two tiers, with sheet of manilla paper between. It also takes 8 two-comb boxes of about 4 lbs., 4 in each tier, and paper as before; also, 16 one-comb boxes, of 2 lbs. gross; also, 20 one-comb boxes (shorter) of about 1½ lbs. gross. Four of these short boxes run crosswise the case, and show the figuring or stamping on the wood to good advantage. All the other 16 show the honey. I call all *boxes* that are glassed; all sections or section-frames, that are not glassed before going to the bees.

I believe that the coming market will demand at least 2 or 3 sizes of packages, and perhaps the smallest size without glass; *all* sizes may sell best glassed. Time will decide. If one small comb *must* be glassed, I am in for the 4¾x5x2½ inch one-comb box, glassed *before* going on the hives.

My main aim in putting these boxes, &c., in the hands of bee-keepers, is to stimulate a pride in all to ask a paying price for their honey, and to hold it till it will *command* it; which course will be to the advantage of every producer. They take just 30 of the 4¼x4¼ sections, and the middle-piece protects the glass, and at the same time hides the tops and bottoms of the section frames or boxes, which Root's case does not do.



HEDDON'S SHIPPING CRATE.

The past season I stored some more than two-thirds of my comb-honey in the 4 lb. boxes, glass on two sides, and less than one-third of my crop in 1½ lb. sections, with no glass. I sold each style at the same price gross, and have had much more trouble to dispose of the part of the section honey that is sold, than all the box honey—which was sold long ago. As my case and hives are so arranged that they are adapted to all these sizes of boxes and sections, I shall make 1878 a year of experiment, as regards the best styles and sizes for the best market at home and abroad. I also mean to test for myself, thoroughly, the small boxes *vs.* large ones, as regards the bees accepting and filling them quickly. I have already settled my own mind on the honey-board question, and I am a honey-boardist.

JAMES HEDDON.

Dowagiac, Mich., Feb. 11, 1878.

* * *

DePere, Wis., Jan. 12, 1878.

"This has been a peculiar winter; the thermometer ranging from 12° below to 50° above, with rapid changes. My bee-house has 20-inch walls; two 6-inch spaces filled with bran, and a dead-air space, besides 4 inches of lumber. It has a loft above and 3 ventilators." F. A. DUNHAM.

For the American Bee Journal.

Honey, the Supply and the Demand.

The market price of honey tends downward. It is much less than it was a few years ago. It seems probable that those now producing honey, will, with their increased experience and facilities, be able to produce a larger amount. It seems probable, too, that not a few new producers will enter the field. With the supply of honey thus largely increased, it is probable that the market price will continue to fall.—This probability has led not a few thoughtful men to doubt the wisdom of continuing in the business of bee-culture themselves, and to think that it is unwise to encourage others to enter the business. Perhaps a study of the progress of some other branches of production may give us some light to guide us in the work of producing and selling honey.

I lived for several years among people whose income came from fruit-growing. It was a great pleasure to see the order and beauty of the many fruit-farms. In spring, the strawberry fields, the raspberry fields, the peach and pear orchards were seas of bloom. In early summer, the delightful fragrance of the strawberry was borne on every wind, and many thousands of bushels of the luscious fruit were sent to the markets of Philadelphia, New York and Boston. In autumn the peaches blushed on many a laden bough, and the grapes grew purple in the sunshine. Of the latter, several hundreds of tons, nicely put up in small boxes, were shipped every year. Living thus among people engaged in fruit-growing, it was not difficult for me to obtain some knowledge of the progress of the fruit business.

Thirty years ago the quantity of strawberries sent to the markets of the largest cities was small compared with the quantity now sent. A few growers, in the immediate vicinity of the large cities, supplied the whole demand. The berries were sent to market in neither elegant nor convenient style. But prices were high. Producers always found a ready sale. Soon they began to produce more largely, and to improve the style of their packages.—More persons took up the business. Some competition was aroused, which resulted in improving the varieties of the strawberry, and the elegance and convenience of berry-baskets and crates. Still the demand was large enough to absorb all the supply at good prices. Growers were stimulated to increased efforts. Many new growers took up the business. At last the markets were glutted, and prices fell very much. It was no uncommon thing for cargoes of berries to spoil and be thrown away. Soon prices were down so low that berries retailed for from 10 to 15 cents per quart. After paying freight, drayage, and commission, but a small sum, per quart, found its way to the pockets of the producers. The producers were nearly in despair.

The large quantity of fruit was, however, the means of advertising the fruit. It forced itself silently on the notice of the people. It was a fragrant and beautiful fact on rail-cars, steamboats and drays, in the markets and the fruit-dealers stalls.—People could not help seeing it; they could not help being attracted by its tempting lusciousness. And then it was *so cheap*, they could afford to buy a quart or two.—Moreover, the berries began to be found in every small and remote grocery, and fruit stand. Formerly, when the prices were high, they were for sale only at the places patronized by the wealthier people. But soon the dealers in poorer quarters found that their customers would buy them at the cheap rates. The consumption of berries was immensely increased. Soon the growers found that their largest crops were absorbed by the great cities, as regularly and certainly as a quantity of flour, or meat. The fact that the tempting fruit was right before the customer, and at such a low price that he could afford to buy, created a demand.

Ere long, the production of strawberries became a large industry. It now employs a large number of people in the states along the Atlantic coast, in quarters whence the berries can be sent to the great cities. The season opens early, with fruit from the south. As the glad summer creeps over the northern hills, it sends the health-bearing berries into all the cities, by every avenue of approach, both by water and land. Not until the middle of July does the Boston market get its last consignments from fertile nooks among the hills of New Hampshire and Vermont. The growers, south and north, do not get large prices. They do not get suddenly rich, but they do find a demand for their product, at prices which enable them to live comfortably. They have a regular, legitimate, honorable business. They have disasters, now and then. An unfavorable season cuts off the crop.—A very large yield puts prices away down to almost nothing. But in spite of occasional disasters, the growers succeed very well.

I have spoken about growing strawberries because with that I am somewhat familiar. But what is true of growing strawberries is true, essentially, of growing peaches, grapes, apples and sweet potatoes. It is true, also, of the manufacturing of cotton and woolen goods. If we choose to go into the statistics of sugar, tea and coffee, we should find that the production of these articles has had a similar history.

After looking at the above facts, and at others in the same line, which will readily suggest themselves to thoughtful people, could a person be accused of reasoning on false and insufficient premises, if he should affirm the following propositions?

1. Bee-keeping will continue for some years to come to attract capital and intelligent labor.
2. Intelligent bee-keepers will continue to make improvements in the science of bee-culture, until the business reaches its greatest normal capacity of production.
3. The increased number of producers, and the improved methods will result in a largely increased production of bees, honey and wax.
4. This large production will continue to put prices down until they will be a good

deal lower than they now are.

5. This lower price will create a demand. The consumption of honey will be very largely increased.

6. Although the producer will receive a less price per pound, he can make much larger profits than now. Suppose, now a producer sells one pound of superior comb honey for 20 cents, and makes, above all expense of production, ten cents. By and by, improved methods of management may enable him to produce comb honey at an actual cost of eight cents per pound. If, then, the demand increases so that he can sell a hundred pounds, at nine cents a pound, where he now sells one pound at 20 cents a pound, he will be a large gainer; he will gain 100 cents on the sale of 100 pounds, just as easily as he now gains 10 cents by sale of one pound.

It seems to me that bee-kepers must take some such view of their business as the one I have here sketched so briefly and imperfectly. It is nearly certain that a larger amount of honey will be produced, and that prices will be lower. To lament about this is useless and foolish. Rational men will turn their attention to lessening the cost of production, and to increasing the demand so largely, that, in spite of low prices, a living income may be obtained.

Keokuk, Iowa, Feb. 8, 1878. O. Clute.

For the American Bee Journal.

Spring Dwindling of Italians.

THE CAUSE AND THE REMEDY.

Mr. Editor:—My experience with Italian bees has been somewhat limited, having only introduced them into my apiary about two years ago. But since that time I have been a close observer of their habits, marking their merits and demerits in contrast with our native black bees. From this brief experience I am led to believe that if we give the Italians the attention their nature requires, we will find them much more profitable to us than black bees.

A few words with reference to the manner in which I winter my bees will lead me to the thoughts I wish to express about spring dwindling. I have now twenty colonies of bees in my cellar; nineteen of them are Italians. At this time (Jan. 9th) they are in good condition. My cellar is dry, dark, well ventilated, and free from disturbance. Each hive is also ventilated, by leaving the entrance and honey-board open. The tops are elevated at one end so that there is a free circulation of air. With this precaution no moisture collects in the hives, and the combs come out clean and dry in the spring. For the last four years I have wintered my bees in this manner without losing a *single* colony, nor have I lost any (natives or Italians) from dwindling away in the spring. I think it is fair for me to attribute my success alone to good management.

Spring dwindling, I believe, comes from a *lack* of good management.

Italians are more energetic, more industrious, more *daring*, than black bees. They will venture out when their owner will shiver in his overcoat. My attention was first called to this fact one cool, chilly morning, a few years ago, on seeing about a dozen Italians busily at work upon a little piece of honey-comb that had been thrown into the yard from the breakfast table. Here was this tempting morsel not ten feet from my colonies of black bees, and yet not one of them had found it. A neighbor, a half mile away, had one or two hives of Italians. There were no others in the neighborhood. I have noticed, at other times, that when a honey-box has been emptied and left in an out-house, the Italians will find it when it is so cold that black bees will not venture out. I conclude, therefore, that Italians will often lose their lives by venturing out on cold, chilly days in spring time.

The remedy is confinement. Let them be put away in a dry, dark cellar, as described above, as soon as winter has fully set in, and *keep* them there till spring, being careful to return them to the identical spot they occupied the summer before. This last precaution is of great importance. In the evening, *after dark*, is the proper time for carrying your bees from the cellar; then they will be quietly settled before morning. There is not so much danger of a panic the following day, if carried out in the evening. It is unsafe to do this when there is much snow on the ground, even if the day is warm, and the snow melting rapidly. In their first flight after confinement, they are almost certain to take a rest before returning to their hive, and those alighting on snow, or on the cold, wet ground, will soon become chilled and perish. It will not take long to deplete a colony under such circumstances. I neglected saying above that every colony should be sheltered from the sun, especially at this trying season of the year. My apiary is on a little hillside facing the north, and so my bees are seldom enticed out by the warm sun, when the air is too cold for them.

Burlington, Iowa. I. P. Wilson.

For the American Bee Journal.

Bibulous Bees.

San Diego, Cal., Jan. 21, 1878.

I notice in the Dec. number an article copied from the *Los Angeles Herald*, which quotes the opinion of Chalmers Scott, Esq., that bees do great injury to the fruit crop.—Mr. Scott and I are intimate friends, and we have frequently discussed this subject, and during the past year I have given it careful study. It is true that where bees are numerous they do injure the grape crop, and in this way: Bees cannot puncture the skin of a sound grape, but, if it is cracked, or any way defective, they soon suck it dry. Grapes grow here very luxuriently, bunches weighing from 1 to 4 pounds each. When nearly ripe, a good many berries part a little from the stem, and, frequently, birds and some insects puncture them, and these are destroyed by the bees. For sale, for table use, they are much injured, as it impairs the appearance of the bunches, but for making wine, the loss is small; very much less than is caused by birds, gophers, rabbits, etc. The past year being one of almost total failure of the honey crop, bees were more troublesome than usual; but so all animals were. The failure of the grape crop can more justly be attributed to the dry season than to the bees. In regard to the oranges, no botanist believes that the extraction of honey from the blossoms injures the fruit, nor that if fruit sets at all it can be dwarfed, or stunted by anything that can have happened to the blossoms. That is also due to the dry seasons.

Bees have a great aversion to feeding where sheep have been grazing, seeming to dislike the smell left by the sheep. The latter, also, do great injury to the sage, by breaking it down during the dry season; they do not eat it. The above is as near the facts as I can get. We are having plenty of rain this winter, and prospects are good for crops of all kinds.

CHAS. J. FOX,
Pres't. San Diego Bee-keepers' As'n.

Los Angeles, Cal., Jan. 12, 1878.

"MR. EDITOR.—In the December JOURNAL, under the heading of 'Bibulous Bees,' you ask the California 'bee kings' if Col. Chalmers Scott is correct in saying that the bees have developed a great fondness for orange and grape blossoms. It is, and they are equally fond of pumpkin and other blossoms. When wine sold for 50 to 75 cts. per gallon, they made 4,000 to 5,000 gallons of wine; but now, as it can be bought for 15 to 25 cts., the fashion has changed. They make a great deal of it now into brandy—but why blame the bees for it? The dwarfing of the orange, by the bees feeding on the blossoms is too ridiculous for comment. In the summer of 1877, I frequently passed through a large flock of sheep, that were feeding among large quantities of white sage, while the bees were humming on every branch. BEE KING.

[So, it appears, the bees have been slandered again. To commerce, and not to the bees, it seems to be chargeable that the vintage of California has greatly diminished. Instead of the fruit being "dwarfed" by their working on the blossoms—the *prices* are "dwarfed," making it unprofitable to gather the vintage! For several years, a similar "shrinkage" has prevailed in "real estate," in "dry goods," and in many other things—why not charge all such in a lump to the bees?—ED.]

* * *

For the American Bee Journal.

"Say"

To R. M. Argo that he hit the nail "square" on the head, when saying that "Bees require everything done at exactly the right time, or there is no success with them."—There it is, in just 16 words—the first nine tell you what you must do, and the last seven give the penalty if you don't do it!

To talk about "light work," "fit for invalids," "all profit," etc., is all nonsense! All bee-keepers, who keep enough to make them an object, often have their clothing soaking wet with perspiration, as friend Argo and myself know full well, and find *plenty* of *hard* work. Ask Doolittle, Betsinger, Palmer, Hetherington, L. C. Root, or any successful bee-keeper, and hear what *they* say. It may be fun to keep 8 or 10 colonies of bees, if a man has something else to get "phatt" on. But to get much from his bees he must make up his mind to *work*. F. I. SAGE.

Wethersfield, Conn.

[True, Oh *sage* philosopher; thou reasonest well! To own a few bees may be *fun*; but an apiarist who looks for profit by scientific management, finds the work not so funny! Friends Hetherington, Betsinger, Doolittle and others work hard in their apiaries during the season, and only by persistent work and scientific management do they obtain such satisfactory results.—ED.]

* * *

For the American Bee Journal.

Springing Bees.

It is probably conceded that in the colder latitudes, bees should have some protection during the winter. A dry, dark cellar *properly ventilated* answers very well.—All have not such a cellar, and it is attended with some trouble to remove them from their summer stands in the fall, watch the ventilation during the winter and return them to their summer stands in the spring. The same trouble exists if a special depository is built, convenient to the apiary; it, however, has this advantage: It is a nice place to extract honey, and keep tools and implements in the summer, but—it costs money.

Many are placing the hives within a large dry goods box, upon the summer stands, filling *all around* with chaff, preparing a passage way out for a fly-hole and ventilation, to be nearly closed when the thermometer indicates 45° or less. The top of the hive is covered with one thickness of a common bed-quilt, with 6 or 8 inches of chaff upon it, after placing half a dozen ¼ inch pieces of lath across the frames, and in the common box hive, opening all the holes on the top of the hive that the steam may escape. I am of the opinion that 8 or 10 inches of chaff all around would not be too much; still less would be better than nothing.

One advantage in this mode of wintering is that it gives an opportunity for a purifying flight, occasionally, during the winter, which may be the salvation of the apiary if dysentery prevails, and it can do no harm if it is absent.

Bees can be wintered pretty well by either of the above methods, but the *springing* needs some attention. I have not noticed, in my reading, any rule or guide for it. We bring our bees out of the cellar or other depository in the spring and examine them. They have wintered very well. We wish to do so, early, for fear they may positively stand in need of a purifying flight. We could return them again, but it is attended with some labor and trouble, and perhaps before the half of them are set out or the half of any one swarm have had flight the air becomes cold; some are chilled and lost; and we must return them to the depository and wait again for a fair day to repeat the operation.

I am of the opinion that when they have had a good flight they should be returned to the depository and *remain until all the earlier varieties of willow and soft maple are out of bloom.* The maple blossoms last but about 10 or 12 days, and, one year with another, the bees do not work on an average to exceed three days on them, and but little, if any longer, on the willows; and, during all this time, they are dwindling away like an incurable, consumptive, human body. The number of owners of honey or pollen is but a trifle, comparitively, still it would be of great value as a stimulent—but it also stimulates the old bees to the fields, to their destruction on chilly days. Is this necessary? No!—Stimulate them within doors with honey, syrup, rye or other flour.

But how are we to ;keep those that are wintered on their summer stands from going to the fields for the willows and soft maples? Suppose we construct a sort of a park for them to fly in, in confinement, after they have had a good purifying flight in the open air. The machine, cage or park, might be constructed, say 2 feet square, more or less, perhaps not much less, and thus: The top and bottom of tight boards, the four corners of light posts, an inch square; the sides and ends covered with mosquito netting, and an opening in one side to admit the ingress and egress of the bees; also a hole or trap door, by which to introduce feed—to stimulate. This door may be through the top or bottom. Connect the machine to the front of the hive, or rather the box in which the hive is enclosed, and fasten so tight that a bee cannot escape; place the honey and flour near the entrance, for stimulation or food, let the machine be fastened by some simple contrivance, that it can be attached or removed readily, at pleasure.

This apparatus can cost but a nominal sum. Any person that has mechanism enough to handle bees can make and attach it when necessary. The netting costs but little.

Again, would it not be advantageous to place it upon the hive prior to the time of their purifying flight, in the event of there being snow on the ground, as many fall upon it and are chilled and lost? Let them have their flight within this apparatus; I think such a flight in confinement will answer the purpose. Mr. H. E. Bidwell, of South Haven, Michigan, gave 80 swarms such a flight several times in the winter of 1874-5, by placing as many as 16 swarms at a time in a cold frame, 12 by 6 feet, with but 15 or 20 inches space above the hive. It may be said, that when there is no snow, the mouth of the hive may be closed with wire cloth; after they have had a good flight, there is much danger of their becoming uneasy, also of their dragging their dead to the entrance, closing it up and being smothered.

I have not had an opportunity to try this cage, but shall immediately, and believe it will work. MOOSH AMIEL.

Wayne, Mich., Feb. 1, 1878.

For the American Bee Journal.

An Amusing Incident.

FRIEND NEWMAN.—Having met with an accident in the shape of a saw-log, which saw fit to run over my legs, thereby confining me to the house, and having no bee man to visit with, I thought of the AMERICAN BEE JOURNAL, and concluded to tell you how, during the swarming season, last year, 1877, I saved one swarm of bees by losing another. I think it would puzzle the best of us to think how it could be done, and still it was a very simple thing to happen, though not intended.

I had a large swarm come out and settle upon a tall, leaning, white-wood tree over my apiary. The tree was so tall and the bees so far up that I did not dare try to get them by going up after them, for fear the tree might break by my weight upon it. So I had to let them be. They staid all day and all night, and the next morning I was provoked to see them still clustered there, knowing I should have other swarms out and that they would be sure to go for that cluster. Soon I saw a swarm pouring out of a hive, I ran to the hive and watched for the queen and as soon as she showed herself, I caught her. Then I looked for the bees, and saw them piling on to the cluster on the tree, and it was a large one, too. I put the queen in a cage and put her down by the hive, then went to cutting out the queen cells, as I was going to put the queen back as soon as the bees got all settled. I did not want to have them swarm out again. In a few minutes, the bees came piling back, and not only the swarm that left there, but the swarm that had stayed on the tree all night. So I had a surplus queen and saved one swarm by losing another, or rather, I saved them both.

A. C. BALCH.

Kalamazoo, Mich., Jan. 23, 1878.

From the Rural Sun.

Artificial Swarming.

"What is the best plan or method of artificial swarming?"

To come as near filling the condition of natural swarming as possible is undoubtedly the best. Now we will examine the conditions of natural swarming. Just before swarming the colony is very populous, but does not contain bees enough for two swarms, as many would suppose, but enough for one swarm and enough left to care for the brood in the old hive. The hive is generally well filled with comb, brood and honey. There are from twenty to thirty thousand young bees (brood) in different stages of development from the eggs in a good colony just before swarming. The colony, also, has a good fertile queen. This is the condition of the colony just before swarming, with young bees continually hatching. After the swarm has issued, we find the old hive as follows: All the comb and brood is still left in the old hive; also, all the honey, except what the swarm could carry with it, and a very few bees left in the hive, just enough to nurse the brood and guard the hive—however, all the bees that are out in the fields at the time the swarm issues, will return to the old hive—and no queen, as she went out with the swarm. But we generally find queen-cells containing the royal larvæ, sealed or unsealed, which will develop into young queens in a few days, in the old hive. Such is the condition of the old colony immediately after the swarm has issued.

To summarize: The old hive is full of comb, plenty of honey, twenty to thirty thousand young bees in all stages of development, called the brood, and a few bees to nurse and care for the brood, but no queen; therefore, it will be several days before the old hive contains a good swarm of working bees and a laying queen, for eight or ten days must elapse before a queen and any considerable number of bees are developed.

Now we turn to the swarm that has just issued; having hived them in a new hive, we find the queen with nearly all the bees that are able to fly—old and young, nurses, comb-builders and honey-gathers. It is true, they have neither comb, honey—except what they carried in their honey sacs — nor brood, but they have all the workers to begin anew and fill their hive with comb, brood and honey. Such is the natural swarming, or swarming according to their instinct or habits.

The best methods of artificial swarming must therefore be similar. And now for the plan that will give each hive its due proportion of honey-gatherers, comb-builders and nurses, etc., as near as possible.

First, stimulate your bees by feeding early in the season to make them strong; and when they have started queen-cells, or if they do not start them soon enough for you, divide them by taking half the combs, bees and all, from the old hive and setting them in the new one, replacing them with the empty frames from the new hive. Set the old hive a little to one side, and the new one a little to the other, and thus get the bees as near equally divided as you can. If you notice more bees going into one hive than the other move it a little further off, and *vice versa;* you can generally tell if you do not know which has the queen by their uneasiness, running all over and around the front of the hive in search of her.

About the twelfth day after the division examine the queenless hive, and cut out all the queen-cells but one, and secure them in cages as directed for Italianizing. Then go to the colony you wish to swarm, take two-thirds or more of the comb from the old hive, shaking most of the adhering bees off into the old hive, set them in the new hive close up to the end, setting the empty frames of the new hive between the combs, alternately, in the old hive; cut out a piece in one of the combs in the new hive and fit in your cage containing your queen-cell, close up your hives and equalize the bees as before directed. By that means you get the most of the young bees, plenty of the older ones, and the queen in the old hive. Although it has but two or three, or prehaps four cards of comb, it has the working force and will soon fill up again, when the same process may be repeated. While the new hive has but few bees it has the most of the brood and a queen-cell that will hatch in four days or less time, you get honey-gatherers and comb-builders etc., in each hive.

About the third day, or perhaps sooner, the young queen will hatch; then examine and see if the bees have started any queen-cells in the new hive; if they have, cut them out before liberating the young queen; in a few days she will be laying, and everything moving on all right; and in a short time the new hive will be full and you can swarm it the same way.

Remember, in making swarms on this plan, to always have the queen in the old hive. R. H. ANTHONY.

Tullahoma, Tennessee, Feb. 2, 1878.

Mich. Agricultural College Apiary Report for 1877.

METHODS ADOPTED.

The following methods were adopted in preparation for the winter of 1876-7. 13 of the 19 colonies were put into the apiary cellar, which is dry, dark, quiet, well-ventilated, and which preserved a temperature of from 35° to 46° Fahrenheit.

Three colonies were buried. A hole was dug in the side of a hill, where the soil was of light sand. Some straw was put in the bottom, on which the hives were set. The top of the hives reached the plane of the general surface level. A mound of straw was then laid on the hives, which was covered with about 4 inches of earth. A second layer of straw was then added, which was also covered, like the first. At the apex of the cone, was left projecting a twist of straw, 3 inches in diameter, which, though uncovered with earth, was so protected with a board as to keep the straw dry. About the base of the mound a trench was dug, which opened on the down-hill side.—During the severe weather of December, when the thermometer marked 19° below zero, a load of manure was added to the mound.

The 3 remaining colonies were arranged as follows: About the hives, except at the front, which faces the east, boards were placed, leaving a space of one foot between them and the hive, and extending one foot above the hives. The enclosed space was then crowded with straw, which also covered the hives one foot. Two of these were protected from wet by a close-fitting cover, while the third was left open at the top, so the straw would become wet and frozen.

CONDITION OF THE COLONIES.

All the colonies in the apiary had young, prolific queens, except in case of one, whose queen was imported, and which contained brood in October. They were examined for the last time in October, when all uncapped honey was thrown from the cells, and each colony provided by weight with 30 lbs. of capped honey. This took eight frames of comb, though in a few cases nine were required. The frames containing the most empty cells were placed in the center, and all the combs received a central opening, cylindrical in form, ¾ of an inch in diameter. A portion of the colonies received bee-bread; others were left wholly destitute of the same. At the end of the space occupied by combs, a division board was placed, so that the bees of each colony occupied a chamber, whose dimensions were about a foot each way. Above the frames a quilt was placed, which hung over the division-board; and above this was a sack, made of coarse, unbleached factory, and filled with chaff.

EXPERIMENTS MADE.

The burying of hives was tried as an experiment, as I have long thought that with proper ventilation, and adjustment of earth, straw, etc., this would prove a very successful method, which if reliable, would possess the merits of being cheap, convenient, and practicable for all and in all places.

In February the colonies in the cellar were all removed to their summer stands, and permitted to fly. They all seemed in fine condition, and after a lively frolic were returned to their cellar quarters. In returning to the cellar, a satisfactory but expensive experiment was tried with one of the strongest colonies. The hive was closely shut up above and below, so that no ventilation was permitted other than that between two smooth boards, one of which rested on the other.

All the colonies were examined and weighed, April 4; and those in the cellar and those buried placed on their summer stands.

CONDITION IN SPRING.

Of the colonies buried, one was so moved in the process that all ventilation was cut off. The bees in this were all dead, though they had lived to breed some. The other two colonies showed a good many dead bees, and some soiling of the hives, but were lively, had some brood, and were in a fair condition.

The colonies that were packed, including the one with straw, uncovered, were all strong, and except one, that had no pollen, contained brood.

The colonies that were wintered in the cellar were generally in good condition, and all that had bee-bread contained brood.

The one with no ventilation was extremely weak, and survived removal to the summer stand but a few days. One colony, whose queen was reared the last of the previous September, was queenless, and the one with the imported queen became so in a few days. These two colonies were united with others. So we commenced the season with 15 out of the 19 colonies.

The average consumption of honey was as follows: The colonies which were buried, 6½ lbs.; those packed in straw, 15 lbs.; and those wintered in the cellar, 7 lbs.

Probably, the very warm February accounts for the large excess of consumption of the bees surrounded by straw. For days together, during that month, the bees were out in force. Had the straw entirely surrounded the hives, the result might have been different, as in that case the bees would not have been induced to take such frequent flights.

Pollen was brought in, for the first, on April 7, while we commenced feeding April 4; so the bees commenced to work at once, and we had no trouble with "spring dwindling." Our increase was entirely by dividing. We sold 3 colonies in the spring, captured one foreign swarm, which alighted on the grounds in June, had one colony stolen in October, and now have 28 colonies.

A POOR HONEY SEASON.

The season has been the poorest I ever knew in this locality. The yield of honey from white clover was excellent. This admirable honey plant was very abundant, and seemed full of nectar. The yield from basswood was very poor, and that from fall bloom but little better. Our financial showing, however, is not discouraging.—Our net cash receipts at the close of the season will be about $100. Add to this the increase in our inventory, all of which has been made by proceeds from the apiary, and we find

THE INCOME.

from the apiary to be over $200. If we divide this by 19, the number of colonies with which we began the winter, we find the proceeds to be over $11 per colony.—Divide by 15, the number of colonies with which we began the season, and we find the net proceeds to be $14 to each colony. In the above account I have not counted my own time. Every other expense of whatever kind is included. My own time was mostly spent in conducting and directing experiments. In fact, much more labor than was necessary to care for the bees was paid for by money from apiary receipts, and hence considered in the above account.—All labor and expense on beds of experimental plants, amounting to nearly $40, all labor on other experiments which were being conducted through the season, all labor in improving grounds, amounting to about $10, are noticed on the expense side of the above account, and not at all on the side of receipts; so that the above estimates of $11 and $14, as the net receipts per colony, is rather too low than too high. Our net proceeds for the year is about 50 per cent. of our entire capital at the beginning of the year.

We have taken 321 lbs. of comb honey, and 667½ lbs. of extracted honey. The former has all been sold or contracted at an average of 20 cts. per pound; the latter at an average of 15 cents.

CONSTRUCTION OF HIVES.

Early in the season we procured a Barnes foot-power saw, an an expense of $35, with which we have made all our hives, frames, etc. This is not only very desirable, but it, or some similar machine should be considered indispensable by any apiarist who keeps more than 20 colonies of bees, and desires the best success. If it is desired to unite the sides of the hive with a beveled joint, this permits it; and not only this, but the joint is perfect. The same is true as to the joint between the different stories of a hive. In preparation of frames, too, in fact in all the carpentry of the apiary, this makes it easy for any one, with a reasonable degree of caution, to have perfect accuracy and uniformity—those most desirable characteristics—of all the apparatus of the apiary. I have also had, during the season for honey gathering,

A HIVE SUSPENDED

by spring scales. This was a new colony, of not more than average strength. During the white clover season this showed on some days an increase of 7 lbs., and once of 8 lbs. During basswood gathering, 2 or 3 lbs. was the maximum; while frequently, after very wet days, of which there were many, there was an actual loss of one or two pounds. During the interim of honey-secretion, between basswood and fall bloom, there was a steady loss of 1 or 2 lbs. per day. The showing during the fall bloom was similar to that during the basswood. The scales showed graphically, what observation had demonstrated long previously, that continued wet weather is not conducive to honey secretion. The scales also showed that when active, as in summer, even though no brood is being reared, the consumption of honey is much greater than during the quiet of winter.

We practiced during the season the Dadant, the Alley, and all other methods we have heard of,

OF INTRODUCING QUEENS,

and have nothing to change in what we said in the manual of the apiary, and in the report of the State Board of Agriculture for 1875 on this subject. Early in the season we prepared several more stands for bees, with evergreens for shade, and brick and saw-dust for a foundation.

BEE-SMOKERS.

We have used three smokers during the season; the Quinby, the Bingham, and the A. I. Root. It was the unanimous decision of my class, my able assistant and myself, that the Bingham smoker was superior. It seems strongest, has a superior draft, and troubles very little by going out and requiring re-lighting. It also stands up better, having a broader base than does the Quinby, and is much more convenient in form than the A. I. Root.

MARKETING HONEY.

We have experimented quite largely in reference to marketing honey, putting honey, both comb and extracted, in the market in various forms. Nor were we satisfied with a trial of one dealer, but we tried various dealers, and even went to other towns. Extracted honey was put up in fruit jars, jelly cups, Muth's honey jars, and delivered in large tin cans. As to labels, we tried putting them on the vessels and also making large, neat labels and framing them. These labels gave the kind of honey, grade and apiary. We were very particular to grade our honey closely; first-class meant just that. We also secured comb honey in boxes, six inches each way, with glass sides, in large wooden boxes with glass ends, in section frames one and two deep above the brood chamber, with tin separators, with thin wood separators, and in case of one tier deep, the commodious wooden separator of Mr. Severson, of Randallsville, N. Y. We thus had opportunity to test the values of the different separators.

THE CONCLUSIONS

on these various points are as follows: We can create a demand for extracted honey, greatly to our own and the purchaser's advantage. Extracted honey sells best in jelly cups. A large label in frame is best. In delivering honey, no pains should be spared to have everything neat. Thorough grading, too, in quality and price, is very important. To invite customers, the honey should not be granulated, and to secure the best results, each grocer should be made acquainted with the means of re-liquifying, and told specially not to apply too great heat, as this injures both the flavor and appearance of the honey. To best secure the desired end, the granulated honey should be placed in a vessel, and this placed in a second vessel containing water, which should be heated to about 175° fahr., or even 200° fahr. will do no harm. If the honey vessel is placed in the other, and all heated on the stove, some bits of wood, or a saucer must be placed underneath the honey vessel to prevent its getting too hot.

Comb honey, unquestionably, sells best in small section-frames, and, beyond question, more can be got in this form than in boxes. To hold these small frames, we should have large frames just the size of our common frames, except that they should be two inches deep. The small frames should be of such a size that 4 or 6 would just fill a large frame. Dr. Southard, of Kalamazoo, makes a very convenient rack to hold the sections. The small frames will sell best when they hold about one pound. If it is not desired to have more than one tier of these small frames above the brood-chamber, then Dr. Southard's rack, or the patented arrangement of Mr. Severson is very convenient and admirable. In this case, the top bar is 2 inches wide and serves as a top to the 2, 3, or 4 small frames that hang below. Between these hangs a ⅜ inch strip of clean, white pine, which reaches not quite to the bottom, just leaving space sufficient for the bees to enter the frames. On the top of this thin strip is tacked a half-round strip, ½ inch across the bottom. This, by resting on the top bars of two adjacent sections, keeps the thin strips, or separators from falling, and the bees from passing above. These wooden separators served as well as the tin separators of Betsinger sections, so far as we could see.—In both cases it was rare to find the comb glued to the separators, and if we are satisfied to have these small frames but one deep, I think they are cheaper and more convenient.

I tried the method of Mr. Baldridge, of St. Charles,—uncapping the honey,—to induce the bees to carry it from the brood chamber to the boxes, with very admirable success.

COMB FOUNDATION.

This was used with considerable success during the entire season. For guides, using it 2 or 3 inches wide, both in the brood-combs and in the surplus frames, it is a grand success. If it could be so made as not to sag, and thus used in the brood-chamber as foundation for all the comb, so that we could secure perforce all worker brood-comb, it would be a still greater advantage. We must reach this. I fastened the foundation by simply pressing it to the wood. I used the artificial comb foundation for sections with the happiest results. Epicures, even, did not detect the difference, and so of course found no fault.

We proved again the great

VALUE OF THE EXTRACTOR.

With proper use, it will pay for itself in a single season, even with no more than two colonies of bees. A thorough trial of the Muth extractor convinced us that it was inferior to A. I. Root's, which we still think the best of the many we have seen tried.

We had 3 of

THE RUSSELL HIVES,

made by A. H. Russell, of Adrian, in use all the season. These are certainly no infringement on the Langstroth, though I find in Bevan on the Honey Bee, a description of essentially the same thing. These hives are very good, though hardly as convenient as the Langstroth style. Without any guides, the combs were all built perfectly true. There is no difficulty in separating the combs, though in putting them together some time and caution is required to avoid killing bees. The claim of superiority for out-door wintering I shall test the coming winter. We have also tried Mr. Russell's box, which only differs from the Isham frame in the mode of fastening the tin corner. As a box it has no superior; and as the width may be varied so as to contain 3 combs, 2 combs, or 1 comb, it is convenient, and perhaps has no superior if it is desired to have the comb surrounded on both sides and ends by glass. A rack like Dr. Southard's, permitting the removal of all these boxes or frames at once, would be a valuable addition.

HONEY PLANTS.

We have experimented farther with honey plants. Having had beds of mignonette, alsike sweet, alfalfa, also called Lucerne and Spanish trefoil, yellow Bokhara, Italian or scarlet trefoil, white Dutch, or white and yellow trefoil clovers, Rocky Mountain bee-plant, or cleome, white and black mustard, which we have bought for two years under the name of dwarf and tall Chinese, catnip, motherwort, rape, borage, saintfoin, and silver-leaf buckwheat. Of these, the following can hardly be recommended too highly: White clover and alsike, in bloom all through June and into July. Mignonette and sweet clover in bloom as early as June 22, the former continuing the year, and the latter for a month, and both yielding bountifully of the most delicious honey. This year was unfavorable and our mignonette did very poorly, yet from the reports of others and our experience in former years, I heartily recommend it. Both of the above are admirable for their exquisite perfume, which renders the atmosphere delightful for long distances.—White Mustard blooms in from four to five weeks from planting, and the black mustard in 7 to 8 weeks. They are both excellent; swarming with bees, especially during the forenoon, through the entire season of bloom. The former continues in bloom about four weeks, the second some longer. Like borage, these seem less affected by climate conditions than most plants, being thronged by bees even after heavy rains.—Rape, much like white mustard, blooms in about 4 weeks after sowing. Borage commences to bloom, if planted the first of May or self-sown, the last of June and continues till frosts. Cleome, or Rocky mountain bee-plant, if planted early or self-sown, commences to bloom the middle of July, and continues for more than a month, yielding liberally of the most excellent honey. Catnip and motherwort deserve their high repute. The first commences to bloom late in July, the other late in June.—Silver-leaf buckwheat is only better than the common in that it yields better, and thus has more flowers. The other plants mentioned in the list seemed worthless as bee-plants. How much of this was owing to the unfavorable season, it is difficult to say. Early in the season several honey-trees were transplanted to our grounds, among which were hard and soft maple, basswood and crab-apples.

PLANNING FOR THE FUTURE.

The various methods of wintering, as described above, proved so successful that we shall practice each the coming winter.—12 colonies we shall put in the cellar, 5 we shall bury, 2 in Russell hives we shall not protect at all, and the 9 remaining colonies we shall pack in straw, varying our method as follows: Our hives are 1½ feet long and 1 foot wide. We shall make the sides of the surrounding box 2½ feet long and 2½ feet high at one end and 6 inches higher at the other. The upper, slanting edge is made by sawing a board 2½ feet long and 6 inches wide diagonally across from corner to corner. One end will be 2 feet long and 3 feet high; the other 2 feet long and 2¼ feet high. These sides will be made of 6 inch boards, fastened together by nailing cleats one inch from each end. These cleats will be on the inside and and will thus form shoulders at the corners. The sides will not be nailed together, but fastened by a staple and nail, so they can be taken down and packed away in summer. The east side of this box, opposite the entrance of the hive, will have a central opening, 4 inches square, with a square tunnel extending from it to the entrance. This will permit the bees to fly, and at the same time allow the hive to be entirely surrounded by straw. The top of the box will be made of matched lumber, fastened together by cleats as before, which will project over the ends of the box so as to hold the cover to it. The cover will incline to the south, while the boards composing it will extend lengthwise in the same direction. This box will cost $1.00; will permit flight, but from its entirely surrounding the hive and confining a layer of straw, densely packed, it is expected that it will prevent much flying, and thus economize in the consumption of food.—Such boxes may be placed about the hive, even in winter if neglected earlier, with great advantage, only when crowding in the straw we should be careful to disturb the bees as little as possible. Putting bees in cellar during the cold of winter is never to be recommended.

Before closing this report, I must express my very high appreciation of my assistant for the past season, Mr. Fisk Bangs, a graduate of 1876, whose close attention to the experiments and needs of the bees, faithfulness in all his duties, efficiency in all the varied labors of the apiary, has made him a very valuable assistant. A. J. Cook.

Lansing, Mich.

For the American Bee Journal.

Chips from Sweet Home.

So far we have no plants that will pay to cultivate for honey. But there are several which pay well for the fruit and honey, and none better than the raspberry. A. F. Moon says of it in The Apiary, page 55, 'the raspberry seems to be a special favorite with the bees, and yields a very fine harvest.'—Langstroth, in his book on the Honey Bee, page 296, says, 'The raspberry furnishes a most delicious honey. In flavor it is superior to that from the white clover, while its delicate comb almost melts in the mouth... When it is in blossom, bees hold even white clover in light esteem. Its drooping blossoms protect the honey from moisture, and they can work upon it when the weather is so wet that they can obtain nothing from the upright blossoms of the clover. As it furnishes a succession of flowers for some weeks, it yields a supply almost as lasting as the white clover. The precipitous and rocky lands, where it most abounds, might be made almost as valuable as some of the vine-clad terraces of the mountain districts of Europe.' By planting a few varieties, bloom may be had from May 25, (with us), till frost. Among the earliest and most valuable are Davidson's Thornless, Doolittle, Purple Cane and Miami; next, Mammoth Cluster, Seneca, and Golden Thornless; and among the latest, Lumb's Everbearer and Sweet Home. (For a description of this, see our advertisement in this paper, under our old heading). Not only do these varieties keep up a succession of blossoms, from which the bees never fail to get honey, but the bee-keeper is certain of a crop of fruit every year, averaging from 1 to 10 qts. to the bush, which will contribute to health, comfort, and economy—save butchers' and grocers' bills, and make home pleasant.

HONEY BOXES.

What honey-box is Palmer going to use the coming season? One of my errands East, was to decide what honey-box to use, as I found the Harbison was behind the times for eastern markets. I now think of using a combination of a section, as used by A. J. King, and G. M. Doolittle, thus:—Top piece and two sides, 2 inches wide; bottom piece, 1¾ inches wide; top and bottom pieces, ¼ inch thick; sides, ⅛ inch thick. These are made ⅛ inches higher than Prize Box, to be used or packed in crate, to be glassed or not, with 5x6 glass, as the trade may determine. Shall hold together while on the hive, and carrying to and from by a strip of manilla paper 1¼ in. wide, put on with glue on each side, so to do as Doolittle does. Put sections in cases; but tin separators would be quite an expense for over 250 hives, consume much time, also, less honey stored; and these three items are quite important with us. Perhaps it pays better to get more honey and less cents per pound. Many speak of loving the bee business, etc. I love the pets, I like the business. Why? Because, there is money in it. Take the money from bee-keeping and it will become scarce.

Eliza, Mercer Co., Ill. D. D. Palmer.

For the American Bee Journal.

Experience of a Beginner.

"I commenced keeping bees about six years ago, in Fremont Co., Iowa, with about the usual experience of beginners. I bought bees in common hives, transfered to movable comb hives. Bought extractor, text and guide books, and subscribed for bee papers, etc. In the winter of 1873-4, out of 35 or 40 colonies, I had but 4 or 5 left; and only 1 or 2 of them in good condition.—The spring of 1877 found me with 30 colonies, Italians and hybrids; one-third of that number in medium condition, and the other two-thirds weak. The spring was cold and wet, so the bees got no honey from fruit blossoms and we had no white clover, so the bees had to be fed until the 1st of July, when sumach and basswood came into bloom. We got no surplus from this sourse, as the weather was hot and dry.—The bloom was of short duration, only yielding honey about 6 days, and from that time till Aug. 10, they made only about enough to live on; from that until Sept. 20, we got our swarms and surplus honey. I got a ton of extracted and 300 lbs. of nice comb, in frames and sections, and increased to 37. Would have had more increase, but worked against it all I could. I am without bees this winter, having sold my bees in October, in Fremont, and moved here.—I expect to go into the business again in spring. I think this is a better location for bees than Fremont. I think with the experience I have had I can make it pay better in the future than I have in the past. Talking with a man, claiming to be a practical, progressive bee-keeper here, a few days since, I remarked, 'Of course, you take the Bee Journal;' his reply was: 'No, I don't go anything on the Journals. I learn by experimenting. Those who write for the Bee Journals don't give the great secret of bee-keeping.' He left me to infer that he knew it about all; at any rate in his own estimation. Now, Mr. Editor, I am interested in this great secret, because it is the secret of success. We are all interested in it. We have been taking and reading the Journal, thinking we were getting this great secret along with the rest; but if we have been deceived, you must make amends immediately, by getting Harbison, Capt. Hetherington, Doolittle or some of those bee men that have this great secret, to give it to us without delay. There can be no mistake about it, for this man has learned it from experience. L. G. PURVIS.

[Those who do not take the trouble to keep posted, by reading the accounts of the new experiments and ideas, as they daily come to the front—always *know it all.*—This is true in politics, religion, and every department of science. Hence we should expect these "know-alls" to be found, once in a while, among apiarists. But it is consoling that we have, perhaps, fewer than many other departments of science.—Those who really know the most are never wise in their own conceits. Having, by hard work, obtained the knowledge they possess, they view the vast sea of knowledge before them—and realize that they are yet close to the shore, with an unmeasured ocean of knowledge beyond.—ED.]

For the American Bee Journal.

Glucose or Grape Sugar.

In the January number of the AMERICAN BEE JOURNAL, Mr. S. C. Dodge narrates how starch can be converted into glucose or grape sugar. Liquid glucose contains only 33 per cent. of sugar. Solid glucose contains but 40 per cent. Therefore, it takes 3 pounds of liquid glucose to have an equivalent of 1 pound of cane sugar, (*dubeunfant, payen, malepeyre.*

Liquid glucose, at 3¾c. per ℔., including cost of transportation, is as dear as honey at 10c. Ten ℔s. glucose contains 3.30 lbs. sugar, and the price is $3.75. For the same price, we get 3¾ ℔s. honey, at 10c., and this honey contains 88 per cent. of sugar, or as much as 3.30 lbs.; just the quantity contained in 10 lbs. of liquid glucose.

Glucose can be produced in three different conditions: Liquid, solid and granulated. The production of granulated glucose is forbidden in france, on account of the facility of mixing it with brown sugar, which it resembles. In Europe they legislate against fraud. Here, our legislators can find no time to attend to *such small matters.*

To detect granulated glucose in brown sugar, dissolve some of it in water, and add 3 or 4 per cent. of caustic potash, and then cool the liquid. If the sugar contains glucose, the liquid will turn brown. Even as little as 5 per cent. of glucose can be detected by this means. Five cents' worth of caustic potash is enough for the experiment. Of course, those who buy brown sugar adulterated with 40 or 60 per cent. of glucose, pay very dear for a poor article.—Glucose is manufactured with sulphuric acid (oil of vitriol). This acid is removed with carbonate of lime, (chalk). But it is impossible to free, entirely, the glucose of the sulphate of lime produced, and a part of it remains in dissolution; sulphate of lime is pure plaster of Paris. Is such a substitute wholesome?

In France, glucose is manufactured with potato starch. This gives the best kind of glucose. It is not as bitter as that made with corn. When glucose was first manufactured in France, the hospitals of Paris resolved to use it to sweeten the beverages of the patients. But as the sickness grew worse by its use, glucose was abandoned.

Bees cannot live on glucose in winter, when cold weather retains them in their hives for weeks. Of course, glucose can be given in summer; but bees seem not to relish it, when it is mixed with honey; and as it contains only 33 per cent. of sugar, to feed it to our bees is a poor investment; for being 67 per cent. glucose, it does not serve as food, and fills their bodies with fæces, and dysentery is produced, if they cannot void these fæces. Besides, plaster of Paris has a deleterious action on their organs.

Glucose is sold in immense quantities in the United States; but never retailed by its real name. It is the same with the oil of cotton seed. Who has seen cotton oil in our market? It is caprera or olive oil.

Brown sugar, maple sugar, golden drips, golden sirup, maple sirup, confectionery, preserves, beer, wine, honey; in fact, all the produce in which sugar exists, or is used, are now adulterated with this drug, in the United States.

Is there not, in this country, some law to punish such crimes? If so, why is infringement so audacious, and with such impunity.

In every country of Europe there are officers appointed to examine the articles offered as food, in groceries, bakeries, drug stores, etc. Let bee-keepers obtain from Congress the appointment of similar officers, and see that they attend to the duties.

To sell our honey is now difficult. Why? Because our cities are flooded with honey mixed with glucose, and sold as pure! Of course, this article is no better than glucose sold as sirup, and sells slowly.

But suppose that all grocers, who sell glucose under a false name be prosecuted, what would be the result? Sugar sirup would bring a price in harmony with the quantity of sugar it contains, and our pure honey would sell readily at good prices.

We produce as fine honey as can be obtained in Europe. We can therefore sell our surplus there; but to obtain such a result, it is indispensable that we send a pure article. The honey dealers of Paris pay from 17 to 18 cents for white, strained, *sainfoin* honey; from 13 to 16 for white mixed; 9½ to 12½ for honey from Chili.—Then what kind of honey was sold by an American firm, at Breman, for the small price of 97 cents per gallon, or 8 cents a pound.—(See AMERICAN JOURNAL for December).

It is not by sending adulterated, or inferior articles that we will see the foreign markets opened to our products. European honey dealers will know that honey remains liquid only because it is impure or because it has fermented. The American dealers, who sent adulterated honey to England, made a costly blunder for them and for the Americans at large.

Let us all take steps to prosecute all the venders of adulterated honey, and our efforts will be awarded by good prices and prompt sales. CHAS. DADANT.

Conventions.

Honey Plants.

READ BEFORE THE MICH. CONVENTION.

Honey is not produced by bees; but collected by them from various plants and stored away for their own use in times when they are debarred from collecting, by the absence of the sweet nectar. It is during these times of idleness that the bee-keeper should strive to bring plants into bloom so as to give the bees an opportunity of working.

During White Clover and Basswood we need no extra honey plants, for they follow one another in quick succession; but it is between Basswood, Buckwheat, and the wild flowers that comes the great necessity for cultivated plants.

The past summer I have been watching closely some beds of honey plants, at the Agricultural College, with the following results:

ALSIKE CLOVER (*Trifolium Mybridum*).

Bees began work upon this plant May 30th, the same time that White Clover came into bloom; and continued in bloom for more than three weeks. During this time it was well patronized by the bees. They could be found upon it at nearly all times of the day. The great complaint among farmers is, that it lodges badly, and consequently is not good for hay. A remedy for this would be to mix the Alsike with either the common Red Clover or Timothy. Then the farmer would not only be benefited, but also the bee-keeper. *It is one of the first of honey plants*, and adds to the value of both pasture and meadow.

MIGNONETTE (*Reseda Odorata*).

Mignonette is a native of Egypt—comes to us by way of France and England. It is well known by every one as being one of the most fragrant of plants.

Early in the season our President made the statement that "Mignonette was one of the best of honey plants; that it commenced to bloom early and would last through the season. Bees could be found upon it at all times of the day in large numbers." Of course I expected great things of this plant, for the bee papers were all very high in their praise of its qualities. June 23 it began to blossom, and it was not until the 27th that bees began their work upon it. They did not seem to take to it very readily, for on every occasion that I made observations I found very few bees present. With us it proved a failure. Others have corroborated this statement. But from the bee papers of last year I take the following: "Bees work upon it to the exclusion of other honey plants. One-fourth to one-half of an acre will supply from fifty to seventy-five hives of bees." Again: "One acre will keep one hundred hives busy for a season."

With these statements all coming from good, reliable sources, we must say that the prospects are good for the future of bee men.

It is rather a delicate plant for this climate, and as this year has been a poor one for honey, it would not be safe for me to pass judgment upon it.

ALFALFA (*Medicag Saliva*), or, in other words, LUCERNE, or *Spanish Trefoil.*

It will stand our dry weather with great fortitude. The roots will go down in a dry time from six to eight feet, have a strong, woody stem—would do well for cattle, but for bees in our climate it does not answer. Not a bee has been seen upon our beds of Alfalfa. This plant would also answer well for green manuring; indeed, it would make one of the best of manures.

YELLOW BOKHARA.

In C. F. Lane's catalogue of seeds for 1878, he says: "This plant is a most excellent honey plant." May be all very well for Wisconsin, but for Central Michigan is no honey plant. Only three bees were seen during the whole season at work upon it. Let others give their testimony.

ITALIAN, or SCARLET TREFOIL (*Trifolium Incarnatum*).

Our beds did not come up.

Prof. Beal says: "It is rather tender for our climate, but further south it would grow, and might become a good honey plant."

MELILOTUS ALBA.

Some call it "Sweet Clover," and well they may, for its fragrance can be scented from afar, and from morning till night it is covered with bees. Commences to bloom the 22d of June, and continues in bloom until July 22d.

It is one of the best of honey plants, only it comes at the same time with White Clover and Basswood, and is not needed at that time. It is a biennial, so that it does not blossom until the second year, and then dies. Its bloom cannot be regulated by man.

WHITE DUTCH CLOVER (*Trifolium Repens*).

Commonly known as White Clover. It comes into bloom about May 30th. Some one stated early in the season that they thought it would lap upon Basswood; but I found that it lapped through and nearly around it.

There is no need of dwelling at any length upon this plant, for it is known the wide world over as a *honey plant.*

CLEOME (*Integrifolia*).

Usually termed Rocky Mountain Bee Plant; but as Cleome is shorter, sweeter, and in every respect more easily spoken, so in the future let us use this word, Cleome, instead of that long and ungainly term, "Rocky Mountain Bee Plant."

Our seed failed us. There were, however, a few plants on the embankment south of the bee-house, which did nobly. It is good for low ground—comes into bloom quite early, Other men who have had experience with it, say it is one of the best honey plants.

YELLOW TREFOIL.

No good as a honey plant.

MOTHERWORT.

Began to bloom about the 20th of June. On the 27th of June the bees commenced to work upon our bed. They seemed to take to it more readily in the afternoon. It will last until about August 1st. It is one of our needful plants.

ESPARCETTE, or SAINFOIN (*Onobrigchis Sativa*).

Hardly hardy enough for our climate.

CATNIP (*Nepeta Cataria*).

Commences to bloom about the 20th of July, and lasts until about the 1st of September. The honey is clear and beautiful. As it comes into bloom about the time Basswood goes out, it is of importance to bee-keepers. Bees work upon it readily.

WHITE MUSTARD.

It began to bloom about June 7th, and lasted nearly a month. The bees commenced work on the 11th; on the 19th the bees were so thick that their hum sounded something like Prof. Cook's buzz-saw, lacking the screech. This is one of the best of honey plants, and I think its bloom can be easily regulated by man so as to have it come after Basswood.

BORAGE (*Borrago Officinalis*).

The period of blooming is from June 20th to cold weather. Where there are no plants for bees to work upon, Borage does very well; but when White Clover and Basswood are in bloom, bees will forsake the Borage for them. As cold weather begins to come, they swarm to the Borage. It is a good honey plant, when there are no plants of greater importance in bloom.

FALL BLACK MUSTARD.

Commences to bloom about the 4th day of July, and passes out about the middle of August, so that it is in bloom when most needed. Early in the morning it is loaded with bees, and they will work *en masse* until about eleven o'clock, when their numbers begin to grow less, and at nightfall hardly a bee is to be seen upon it. Its bloom can be easily regulated by man, by sowing either earlier or later in the season, and can safely be classed among the best of honey plants.

RAPE.

Can be made to bloom to suit the pleasure of the one sowing it. It comes up very quickly, comes into bloom soon after it is up, and will last about three weeks. The bees swarmed to the bed of Rape, worked well all the forenoon, and then left for more profitable fields in the afternoon.

From the December number of The Gleanings in Bee Culture for 1876, I have taken Prof. Beal's article on honey plants:

"I am frequently asked to identify or give names to certain plants upon which some person has seen bees at work. This does not usually occupy much of my time, especially if the specimens are well put up, as most of them are known at sight, or after a few minutes' examination.

"But the thought occurs to me, of what benefit can it be to the person sending the plant to know whether it is *Aster Machrophyllus*, *Aster Prenanthoides*, or *Aster Grandiflorus;* whether it is *Solidago Petiolaris*, *Solidago Canadensis*, *Solidago Missouriensis?* My examples are some which are included in the list lately received. Of Asters, we have in the Northern States 41 species, beside 40 to 100 more which resemble them to a person unaccustomed to botany. Of *Solidago*, or Golden Rods, we have 37 species, and some others which resemble them. Scarcely one of these has a separate or common name. Asters look too much alike to be distinguished from each other by any one but an expert. The same is true of Golden Rods and a vast number of other bee plants. They will get the species and even the genera 'all mixed up.' Even the botanist gets some of them mixed occasionally. Our country is renowned for the abundance and variety of the Asters and Golden Rods in September, till the hard frosts appear. These are found in open or unwooded regions, in swamps, along streams, and on the prairies. The fact is, there are nearly a hundred times as great a variety of flowers which furnish bees with food, as most people imagine. On checking off for a noted bee-keeper, who wanted to make a list of bee plants, he seemed to be surprised at the great number, and said he only wanted the best of them. Which are the best? The forty-one asters are all good. In one locality certain species abound in great numbers; in other places, some disappear and others take their places. To be sure, there are some Asters and other plants affording good honey and pollen, which rarely exist in large numbers. The same is true of Golden Rod and many other plants. I suppose a plant is desirable if it exists in quantities large enough to afford much food during a long period, or if it affords food a certain time when most other flowers are scarce.

"I have made the action and behavior of insects on flowers a study for years. Some flowers are only visited in the morning or forenoon, as the dandelion; others in the afternoon, others at all times of day when not raining. I tell no news, that Basswood and Raspberries afford good honey, while the Tulip Tree and Lobelia afford honey which is unpleasant or unwholesome to some persons.

"The *Ranunculaceæ*, Crowfoot family, afford us 30 species or more upon which bees work; some of them open early in spring. The *Cruciferæ*, or Mustard family, about 70 species; *Malvaceæ*, or Melon family, over 20 species; *Geremaceæ*, or Geranium family, 13; *Anacardiaceæ*, or Maple, &c., 11; *Leguminocæ*, or Pulse family, 110 or more native, besides some exotics; *Rosaceæ*, or Rose family, 83, and several exotics; *Saxifragaceæ*, or Saxifrage family, about 30; *Caprifoliaceæ*, Honeysuckles, &c., about 30; *Compositæ*, Sunflowers, Asters, &c., perhaps 325, besides many in cultivation; *Lobeliaceæ*, Lobelia family, 13; *Campanulaceæ*, or Bell Flowers, 7; *Ericaceæ*, Heath family, 60; *Scrophulariaceæ*, Figworts, about 60; *Verbenaceæ*, Verbenas, 10; *Labiatæ*, Mints, many of much value, 78; *Borragineæ*, Borage family, 28; *Asclepiadaceæ*, Milkweed family, 25; *Polygonaceæ*, Buckwheat family, 38; *Liliaceæ*, Lily family, 50. Besides these, there are many where there is only one or two, or a few in a small order, perhaps not far from 570. Then, probably, there are a hundred or more about which I am uncertain. If I have added correctly, I give, above, about 1,775 species from which bees get more or less honey or pollen. These grow east of the Mississippi river and north of Kentucky, in the United States. Some, like the grasses and pines, have no showy or fragrant flowers, and afford little or no honey. As a general rule, those plants which produce odorous or showy flowers afford honey and will be visited by honey bees, unless the flower is of a shape which makes it impossible for the bees to reach the food.

"It would be a great source of pleasure, and in some cases perhaps a profit also, for every bee-keeper to be a good botanist. In fact, every person should study botany more or less, as any one can if he only tries and perseveres. The culture it gives, the enjoyment, the discipline, all place botany in a high position as a science."

In summing up the cultivated honey plants that I have had under my personal supervision, I find that those of most importance to bee-keepers, where there is no Basswood, are: Alsike Clover, White Clover, Melilotus Alba, Motherwort, Catnip, Dwarf Chinese or White Mustard, Black Mustard, Borage, Rape, and Mignonette. Indeed, they are all good for any region of country.

The question of honey plants is of such vast importance to all bee men, and in my opinion one season is not sufficient for it to be worked up thoroughly and placed before the public, as the seasons differ to such an extent. FISK BANGS.

Scientific Bee Culture.

ADDRESS BEFORE THE WASHINGTON COUNTY AGRICULTURAL SOCIETY AT SOUTH HARTFORD, N. Y., JAN. 10, 1878.

Inasmuch as some of our most acute searchers into the hidden wonders of the insect world, have, with enthusiasm, devoted their lives to the profitable study of this wonderful insect, I venture to intrude into the usual discussion of stock and crops, to present a few facts in relation to bees and honey.

From the progress of the past few years, it is not too much to expect that the honey interest will yet rank beside the other great farming industries of the day. We are led to this expectation, from an examination into the statistics of honey production, and the sources of supply by which we are surrounded.

From careful observation and from the experience of others, it is safe to say that an average of 500 pounds of honey could be obtained from every square mile of our county; and deducting one-half of this for poor seasons, drouth, etc., and then our 850 square miles would produce over 200,000 pounds, while the provision of artificial pasturage would greatly increase it.

To those unacquainted with our honey resources these statements may seem to be overdrawn, but we have at hand reliable figures from various localities in our own State, where the production is over 1,000 pounds per square mile. While California, noted for its wonderful productions of soil and mine, has localities where there seems to be no end to the flow of this abundant sweet.

While localities are thus being developed, individual effort is progressing in a remarkable degree, and we have reliable reports of single swarms producing as high as 500 pounds, and whole apiaries averaging nearly 100 lbs. to each swarm.

These results are obtained only through unremitting watchfulness and labor, and the adoption of modern improvements.

The first improvement over the old straw hive was substitution of the surplus boxes, from this sprung the well known invention of the Weeks' patent hive of our grandfathers' days.

The next great step in advance was the invention of the movable frame hive by Langstroth. The discovery of this principle opened up a new world of study and observation for the naturalist and apiarist. For, previous to this, many of the habits of the bee, and its domestic arrangement were enshrouded in mystery. A hive constructed upon this principle contains several frames or cards of comb which can be readily removed and examined, thus giving complete control of the occupants.

Soon after the invention of this hive, the good qualities of the Italian bee were discovered, and importation of improved stock was commenced; and at present the active golden Italians are superseding in many localities our common black bee. And now, like our poultry fanciers who have improved their breeds from all parts of the world, our importers are searching all continents and isles of the ocean for new and larger races of bees. And the coming season will witness the importation of bees from Java and Borneo.

The great advantages sought after in new races of bees is a longer proboscis, that will enable the bee to reach honey that hitherto has been unattainable, but which is so abundant that the honey yield would be doubled, and it would become the cheapest and most abundant sweet known.

The next improvement which marks a new era in bee culture was the invention of the honey emptying machine, or extractor. Previous to this discovery, liquid honey was obtained by breaking the combs with all their impurities and squeezing out the honey, which always tasted rank with bee-bread. With the extractor the comb is not broken, but where the honey is thrown from it, the emptied comb is returned to the hive to be refilled by the bees. A single card of comb can be used thus until it is black with age, still the honey thrown from it is as clear and pure as when gathered from the flower. Now when we find that it takes from fifteen to twenty pounds of honey to produce one pound of comb, we have in the extractor a great economizer. Wax is a secretion from the honey after it is eaten by the bee, and resolves itself in thin scales on the abdomen, from whence it is taken by the young bees and used in comb-building. Thus, every pound of empty comb supplied to the bees, is equal to many pounds of honey for the bee-keeper. A third more honey can be obtained with the extractor than of comb honey. And each particular yield can be kept separate. We have in our county, three great sources of honey: White clover in June, basswood in July, and buckwheat and other dark honey in August and September. Our whole yield is crowded into about three months, and owing to drouths and other dispensations of nature, the yield is sometimes cut down to one month, or perhaps but a few days. It is, therefore, possible, with our machine, to keep our beautiful white clover and basswood honey separate, and our buckwheat and other dark honey by itself. California produces honey of beautiful quality from white sage, and from Florida we have honey from orange blossoms.

After the demonstration of the beautiful theory of emptying the combs by centrifugal force, one would suppose that the apiarist would rest content for a season. But the spirit of improvement which possesses alike the whittling Yankee Josey, and the profound scientist, urged the bee-keeper to still further demonstrations of his skill, and the very latest invention which has been successfully tried during the past season is the manufacture from beeswax of artificial comb or comb foundation; this is given to the bees in beautiful yellow sheets, and is readily worked out by them into comb and filled with honey.

I have thus briefly explained some of the most important improvements in bee culture, and the great problems that are now receiving the attention of the progressive apiarist, is to both increase and cheapen the product, making it an article of necessary use in competition with cane sugar, and an article of export to foreign countries. American honey is proving superior to European honey, and a demand has been already created.

With extracted or liquid honey the bee-keeper has met with many difficulties, one of which is adulteration, but the greatest is the ignorance of the purchaser. The distinctive peculiarity of honey to crystallize or candy has been a detriment to its sale, while that very quality alone of all others should recommend it to the consumer. Nearly all pure liquid honey will candy, and in that condition will keep for years; and the application of a little heat at any time will render it liquid again.

It has been said that our land flows with milk, it should further imitate the promised land described in sacred history, and flow with both milk and honey. We have within the tiny flower a spring of delicious nectar, and wherever its humble lot is cast, either upon our hill-sides, in our forests, or around our very doors, the air we breathe is made fragrant with the evaporation of its wasted sweetness, wasted for the want of our tiny insects to gather it.
JOHN H. MARTIN.

Hartford, N. Y.

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Good Queens—How to Get Them?

READ BEFORE THE ADDISON CO., VT., BEE-KEEPERS' ASSOCIATION.

Ever since the Italian bee was introduced and raising queens for the public became an object, a disposition has been manifested by each breeder to make the public believe that his queens were the only good and pure ones to be found in the market. While this may have bee true in some cases, it is my opinion that very many poor queens have been sent out at high prices, and at the same time the queens may have been pure Italians. I will here consider briefly what constitutes a good queen.

FIRST.—A good queen should be a PURE ITALIAN, not of the lightest hue, as I prefer a dark queen or one that has dark progeny, as I consider the dark ones better box workers. She should be large and lively. I speak of their being lively because I find some bees are like some men—rather moderate—they move about as though they were lazy, and so I find them, particularly the workers.

SECOND.—A good queen will comence to lay early and lay abundantly all summer until late in the fall. You may say that any queen will lay early if she has sufficient quantity of bees. Very true, a good queen will produce long-lived and hardy bees and therefore will always have a strong swarm, hence the necessity for breeding such queens.

THIRD.—A queen should produce workers that are good honey gatherers, (and for me good box workers,) and for this purpose I prefer a large and strong bee. I find a great difference in the size of worker bees. Some queens produce small bees. Small bees are not so good box workers and they are more apt to sting. I find that queens reproduce themselves, and would not therefore breed from such queens.

FOURTH.—I like a queen whose progeny are quiet and of a mild disposition, so that when you take out a card of comb from the hive the bees will remain quiet and not run from one side of the comb to the other, and at the same time give you four or five stings before you get through looking them over. I would also have bees prompt to defend themselves against robbers.

FIFTH.—One of the best qualities of a good queen, in my opinion, is a non-swarmer; one that is contented to stay at home and attend to business. Such a queen will produce bees that will store their honey in boxes and leave the brood chamber for the queen to lay in, consequently keeping the combs full of brood and the colonies always strong in workers. Such a queen will most invariably produce good box workers. You have, no doubt, all of you, been puzzled at times to know why certain swarms did not go into the boxes, while at the same time they were as strong and even sometimes stronger than their neighbors which were working readily in boxes. I have had such experience, and have come to the conclusion that it is in the strain we breed from. All strains have their peculiarities, and we should therefore consider all of these POINTS when breeding queens.

I had but three queens last year that I would breed from. I have but one of them left now, but I have a number of young queens that I hope will prove to be what I call good ones. There are many other points on this subject that I might speak of, but for fear of being tedious, I will pass to consider briefly

THE BEST MODE OF RAISING QUEENS.

In this as in other branches of bee-keeping, I do not claim to be an expert. I have never raised queens for the market; I merely raise for my own use. I can, therefore, only give my mode, and to this branch of the business I have given much thought and have come to the conclusion that it is best to breed with great care.

1. I would not breed from a queen until I had summered and wintered her, or in other words, not until she is a year old and even two years are better. At that age I have had a chance to test her good qualities—which should be many. Another reason why I prefer an old queen to breed from is, she has become more mature, and consequently her progeny will be hardier and longer lived, queens as well as workers. I do not see why this rule does not hold good with the bee as well as with animals. I therefore would not breed from a young and untested queen. I believe that all of the above good qualities can be attained by careful breeding.

2. There are many ways of raising queens. Some prefer to raise them in full colonies, others, for economy raise them in nuclei, and claim that they are as good as those raised in full swarms. For my part I see no difference as long as nature is complied with. They are as good and perfect, if raised in nuclei as any other way. In fact, I prefer to raise my queens

in nuclei because I can then watch them and know that they are raised from the egg. In this way I do not have any nine-day queens, but where they are raised in full colonies the bees are liable to start queens from larva that is three or four and even five days old. Such queens are worthless. I am positive of this, for I have tried them to my satisfaction.

I raise my queens by taking a card or two of hatching brood and young bees from a hive that can spare them (no eggs or larva), put them in an empty hive and leave them twenty-four or thirty-six hours, then I take a strip of comb with eggs from breeding hive, cut say one inch wide and three or four long, and fit it in one of the brood combs already in the nucleus hive, leaving an inch space under the eggs for the cells to hang in them after the bees have formed or started queen cells, which will be in twenty-four or forty-eight hours. I add to them a card of larva, as they use larva for feeding queen larva (or making royal jelly as it is called). In from eight to ten days the cells will be capped, and in twelve to fifteen days they can be cut out and inserted in any hive desired, or put in the hatching box if you have no use for them for a day or two.

This is one way to raise queens, and I like it as well as any, as it is very simple and easy, and I am sure not to have any nine-day queens. There are many other ways that I might mention but for the want of time. Now, in conclusion, let me repeat, *Breed only from your best queens.*

Bristol, Vt. A. E. MANUM.

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Comb Foundation in Surplus Boxes.

READ BEFORE THE N. E. CONVENTION.

Mr. President and Gentlemen:—My prolonged stay in Michigan will prevent my presence at the Convention, I regret my absence, as there will be questions presented of vital importance to the industry.—Prominent among them will be the subject of Artificial Comb Foundations.

I have had no reason to change my views as expressed before the National Association in October, but the importance of one feature of the subject, only alluded to there, has so grown in my mind, as to warrant bringing it before the Convention, viz:—The use of comb foundations in surplus boxes. The importance of the subject extends beyond the present self-interest of any new business to the broad field of a rapidly-growing national industry. That the subject may be discussed in all its relations to the future of comb honey, before its use shall become general, seems to me of great importance; for in such discussion, considerations may be presented that will prevent a hasty verdict, to be regreted in the future, and suggestions offered that may change the views of those who hold such relations to the business, through the press, as to affect greatly for good, or otherwise, depending on the views they advocate.

I concede there may be a little present profit by the use of foundation in surplus boxes, but regard it as trifling, compared to the damage it may work in the future market of comb honey; but even now, there are honest experimenters, who question any profit in such use of it. While I consider the utility of the invention, as regards its use in the breeding apartment a problem already solved, I cannot but be solicitous of the effect in the future, if its present use is urged by all, without other than present considerations.

Our products must come in direct competition with other saccharine food, which now have a well-established place in domestic economy and trade. To supplant these in any measure, we must have an argument.

We are certain of the one, of its beauty and delicious taste; and if to this we can add that of *purity*, I see no reason why we cannot take the field.

There are, at present, few articles of food, of this class, to which the stigma of adulteration is not fixed. Prominent among them are the syrups, sugar-house, silver and golden drips, etc., which now are so much used on the table, and with which our extracted honey must come into most direct competition.

These syrups, at one time, brought a high price; but of late have been so cheapened by adulteration that they are considered by many, even dangerous, owing to the presence of sulphuric acid remaining in the glucose, with which they are adulterated.—Glucose being the product of corn-starch, treated with sulphuric acid.

Such experiments as those made at the Michigan Convention, will educate the people to these facts.

Extracted honey, from its nature, will be liable to such adulteration; and we already see the effect on the market, by this cry thus early raised against it. Therefore, I know of no duty so great, especially to those who undertake to direct the interests of the industry, as that of guarding our products from stigma.

One great problem of the future will be the protection of extracted honey from adulteration; and for this, the united action and wisdom of honey-producers will be required. For it certainly will be "doctored," to a great extent, unless some steps are taken to prevent it; for it certainly opens as fruitful a field for profit in its adulteration as do the syrups. And would it not be well to take some initiative steps soon, to "nip it in the bud," as it were, before it gets of large proportions. All will concede that virtue is the art of protection, and so I make the burden of this paper such action in regard to comb honey, that we shall not put in the hands of our opponents a weapon, in the future to be used against us; and to this point I bring the subject of this communication.

Let any bee-keeper of experience, contemplate for a moment the purity of commercial beeswax, or, what is more to the point, a quantity of refuse comb, before it is adulterated. Containing, in addition to other impurities, dead bees, in various stages of putrification; with moth worms, all sizes, dead and alive, together with their excrement,—and this to be cooked together in a kettle of water, until the savory extract has thoroughly flavored the beautiful yellow wax, destined to become a delicious morsel, and component part of comb honey. And, in case your own stomach is not effected, I ask, cannot such a picture be used by our opponents against us?

We must keep comb honey free from the impression that it is other than the pure, beautiful food God has made it, working through the wonderful instinct He has planted in these little creatures.

But let the impression once go forth that it is otherwise, that it is "doctored," that it contains anything of questioned purity, that the beautiful comb is not the work of wonderful instinct, but a thing gotten up by machinery in any sense, and you have deprived it of an interest to the consumer, that must effect the sale of it as an ornament and luxury to the table.

The time may come when it will be calculated as an article of food, like beans and potatoes, simply for the amount of nutriment it contains. But that time is not yet.

Commercial men, whose business can be changed at every emergency, dropping this article they buy and sell, and taking up another without serious loss; or manufacturers, with a present self-interest, may advocate its use, but the producer, who has taken up the industry as a life business, cannot, for a trifling consideration, afford to affect its present standing as a strictly pure and beautiful article of food.

Of the few pure things that can be offered to the public, as such, let this one of comb honey remain permanent among them, as the one most delicious in flavor, beautiful in its purity, and of great interest, it being the product of wonderful instinct.

Some one may say that all wax is not made from such stock as described. If not all, I think there are but few bee-keepers but what have seen such as described rendered into wax. Others, that when foundations are used the bees reduce the thickness to that of natural comb.

And again, that they have been used in surplus boxes and the product sold without complaint. To the latter, I would call attention to the small chance of any complaint reaching the ear of the producer, and to the fact that few consumers know of any attempt to suplement nature. But publish the fact that such a thing is introduced, and *that* a substance of questioned purity, I venture it will be found, and what has been called a "fish bone" will be unpleasantly reported. While at times the bees reduce the center quite thin, all who have experimented know that very often, especially if the weather is cool, they leave it as thick as when introduced.

For fear that some may misunderstand me, I will say that I most heartily recommend its use in the breeding apartment, and believe it to take rank with the movable frame and extractor, the three great improvements of the age.

If there is profit in its use for surplus boxes, there is no bee-keeper in the country more favorably situated to reap such present benefit than myself. But appreciating in some, small measure the great future interest at stake, I shall refrain from its use, until careful thought and experiment shall have determined to what extent it may be used without the chance of inflicting an inseperable damage to the industry.

J. E. HETHERINGTON.

Over-Stocking.

READ BEFORE THE N. E. CONVENTION.

Brother Bee-Keepers of the North-Eastern Bee-Keepers' Association :

Though the above subject is somewhat neglected of late, still I feel that it is one that most of us will have occasion to think of before many years pass by. It seems that the mind of man is well calculated to harbor accommodating theories, even unto a settled belief. When we wish one to believe in our heaven, we do not *try* to *prove* its existence, but we present in as glowing style as possible, to his imagination, the joys and beauties of that country—and he *believes from choice.*

Now, writers devoted to the different branches of agriculture, of which bee-keeping is one, take advantage of this same weakness in us, their scholars, and treat us to such errors as these: "This business is the most profitable one known to man;" "Can't over-do it;" "Hundreds of colonies can be kept in nearly every locality without *over-stocking* the field;" "Thousands of pounds of honey yearly go to waste," &c.

It has been the business of the trinity of reason, observation, and experience, called *science*, to root out these accommodating theories, and place in their stead some *hard facts*, some of which are not just as we would like them to be. It has been the crowning glory of the nineteenth century to prove the indestructibility of matter, and the eternal persistence of force. Thus we see that sweetness of any sort or kind has never "gone to waste." Maple trees tapped for many years lose their power to yield sugar. The honey not gathered last season, is to-day somewhere in nature's great reservoir, awaiting the coming bee. (Cyprians, no doubt.)

How many colonies can we most profitably keep in one place? Every one knows that we can care for a number of colonies in *one* apiary with much less expense and labor than in *two* or *three* apiaries. An apiarist whose judgment we all respect, last fall "brimstoned" over one-half of his colonies. Another successful bee-keeper said to me: "The ease of overstocking is little understood by honey producers."

My friend, W. J. Davis, of Youngsville, Pa., whom we very well know to be a bee-keeper of extraordinary skill and opportunity, writes me as follows: "Your ideas of 'over-stocking' *I know are correct*, as applied to this locality. I can secure *more* surplus honey from 50 stocks (spring count), than from 100 in the same locality. I have now 100 in my home apiary, all heavy and in fine trim for winter, and but for considerations of humanity, I could net the most cash within a year to kill one-half of them, using the combs and honey for young swarms next season."

I would kill the queens about twenty-one days earlier, and brush off the remaining bees at the end of the honey season, sell the honey, and lay away the combs for the next year.

I expect to see this method extensively practiced by honey producers. It will pay us better in the end than to sell off our surplus stock. Such a course will greatly improve our stock, and secure us safety in wintering. I have in my possession several other letters from worthy apiarists, stating about fifty colonies as the most profitable number of stocks to keep in one locality.

Now comes the question, What area constitutes a "locality" for the apiarist? My bees go south four miles and bring in basswood honey rapidly when the yield is good. I find my bees three and a half miles north of the apiary, working on golden rod, of which a book bee-keeper would say, there was enough for 1,000 colonies within the first mile in that direction. Even if we *can* beat the bees making comb, we haven't yet been able to keep them close at home. They seem to *think* they know their "little biz," and something about where honey is still remaining in the blossoms!

My apiaries are six and a half miles apart, and yet are close enough. I have every evidence that I have seen bees from each apiary on the same plant. There are not a dozen colonies near either apiary belonging to other parties. If I wish to gather only one bushel of walnuts, I prefer a ten-bushel pile to scoop them out of, to a scattered bushel under a ravaged tree. Let some "go to waste." It takes longer to find the *last drop* than the *first bucket full*. You will recollect that those large *pro rata* yields come from apiaries of few colonies.

The practicability of running more than one apiary, is a matter of doubt among many of us who are trying it. Could the instinct of swarming be exchanged for an equal amount of energy in the boxes, capital could find a broad field in apiculture, that might pay a satisfactory percentage for a few years to come.

I will pay $100 for an individual right to the use of a practical apparatus that will hive my bees in my absence, such machine not to cost more than a good hive, and I will furnish one for each colony. The above sum I will give to get a part of my bees out of the way of the other part, at the same time securing the increase without an every day's attention.

In my opinion, I have now bees enough to stock at least four locations—in all, 250 colonies. Now, I am confident that our fields and markets here will not afford a hired hand for each apiary during the busy time of year that we need one to hive swarms. Now, if the above ideas are conceded *correct*, can we, any of us, fail to realize the importance of selecting a location for an apiary where few or no bees are kept by others, and in maintaining such a condition of affairs as long as possible.

I fully believe that nearly the entire honey crop of the future will be raised by *specialists*, and we need not crowd each other to the detriment of both parties so doing, as our broad country affords far more good locations for our favorite pursuit, than coming demands for honey will warrant us in occupying.

I hope these scattered ideas may draw out sharp criticism and friendly discussion, which I may hereafter read in THE BEE JOURNAL, and from which receive personal benefit. JAMES HEDDON.

North-Eastern Convention.

The eighth annual convention of the North-Eastern Bee-Keepers' Association was held in Syracuse, N.Y., on Feb. 6, 7 & 8, 1878. Vice President, G. M. Doolittle in the chair. J. H. Nellis, the secretary, called the roll, after which the minutes of the last meeting were read, and Mr. Bacon corrected, by stating that the report concerning comb foundation was intended to apply only to the use of it in boxes. The report as corrected was adopted. Mr. Bacon, the treasurer, read his report, which was accepted and adopted.

Many names were added to the Roll, for the coming year.

L. C. Root, E. D. Clark, and N. N. Betsinger were appointed a committee to have charge of the question drawer.

J. H. Nellis was appointed to examine and report upon the minutes of the National Convention, held in New York last October.

W. E. Clark, L. C. Root, and C. D. Jones were appointed a committee to consider a proposed amendment of By-laws, Art. IV,

DISCUSSIONS.

"*Will it pay to cultivate any crop with the sole view of producing honey?*"

The chairman thought it doubtful whether it would pay to cultivate any crop for that purpose. He lived in a section where nature furnishes the desired blossoms. He did not think it would pay to grow teasels, as these are in blossom at the same time as the basswood, and it is very laborious to grow them.

How, then, can teasel honey be distinguished from basswood? The bees seem to prefer working on teasels; and hence, when we see them at work on teasels and neglecting basswood, we naturally infer that they are making teasel honey. The latter is clearer and more translucent.—Teasels grow anywhere that winter wheat will do well. There is no other flower in basswood time that makes as clear honey. Sumac makes a yellower honey, and blossoms earlier. In the fall of 1872, he fed sugar to his bees; since then, he has not fed them at all, but reduced his swarms when they were not strong enough to winter well.

Mr. Longstreet found alsike clover good for honey. It afterward made excellent feed for horses. He did not know of a crop that it would pay to cultivate exclusively for honey.

Mr. Bacon asked the best means of preventing bees from swarming. He tried hiving the young swarm, and set it by the old one, and afterwards destroyed the queen-cells, and re-united the swarms. So far as tried, this had proved successful.—The main object is to prevent swarming the second time. The first is admissible.

Mr. House, of Fayetteville, had for 8 or 10 years, practiced artificial swarming a few days before the bees would naturally swarm, and seldom failed. Clipping the wings of the queens was unsatisfactory.

C. C. Van Dusen favored artificial swarming. It is important to give ample room, and get the bees to work early.

The chairman, about 8 days after swarming, when 1 queen has hatched, clips all the other queen cells. In his experience, if he clipped the cells in advance of the hatching of 1, the bees provide for raising an unusual number of queens. If we have a good honey season, there is little trouble about swarming. In poor seasons, nothing will prevent Italians from swarming. Removing all but 1 virgin queen does not entirely prevent swarming.

Mr. House.—When bees get a swarming fever, it is hard to subdue them.

Mr. Nellis has a house apiary, and never had a swarm issue from it. Last summer he had 15 swarms making box honey.—They gave him about 60 ℔s. of box honey each. The house is octagonal, and holds 68 swarms. It is lined with building paper, and never becomes extremely hot. He thinks excessive heat makes bees swarm.

Mr. Betsinger's bees swarmed the most in the poorest seasons, 1866 and 1876. A lack of honey causes swarming.

Dr. A. H. Marks found that his bees swarmed most in the honey-producing seasons.

The chairman wanted to know if the bee papers are right in favoring consumers and dealers instead of the bee-keepers, who are their patrons. He then read an extract from the *Bee-Keepers' Magazine*, calling for the sacrifice of the glass on the small boxes.

Mr. Bacon thought it was ungenerous on the part of the papers. The only profit in the small box is the glass. It is a mistake to gather honey in less than 5 or 6 ℔. boxes.

The president thought such papers did not deserve the support of bee-keepers.—He read from one that hoped honey would come down to 5 or 6c. per ℔., so that every one could afford to use it.

Mr. Nellis thought the demand would decide the form of the package. If it is wanted in glass, it will be put in glass; if in any other form, that form will be adopted. Rich people want it in glass, [and care not about its being weighed in. It protects the honey and keeps it clean.

Mr. Snow concurred substantially with Mr. Nellis. He thinks he has created a home market for extracted honey, and he can make the most money out of it.

S. M. Locke thought the buyers of honey know that they get honey in the box by gross weight, and, therefore, there is no fraud, as intimated by the *Bee-Keepers' Magazine*. It costs more to make honey in small boxes. If the consumer wants it so put up, he must pay for it.

On motion, G. M. Doolittle, L. C. Root, S. M. Locke and W. E. Clark were appointed a committee to consider the conduct of certain bee papers, and report what action this Association ought to take in regard to the matter.

EVENING SESSION.

Several new members were received. The Convention then discussed:

"*In what manner shall we use the surplus funds of the Association to best promote its interests?*"

It was moved by Mr. Root to send out blanks about August 1st, to be filled out by members and returned to the secretary, who will in return forward the information thus obtained about the products to each member. It was maintained that this would furnish a basis for regulating prices and aid in successful marketing.

Mr. Bacon showed that, as matters now stood, small producers, who make no business of honey making, too often make the price, by taking to market honey out of season and accepting the first offer. If properly posted, there would be a better chance for having a paying home market. But prices must not be above the reach of the consumer. Consumption must be encouraged, and the middlemen must be content with a fair profit.

The chairman and Mr. Betsinger could get only 16 cts. a pound offered by a wholesale dealer in Syracuse. They sold in New York for 24 cts., and saw two-thirds of their honey go to Philadelphia at 28 cts.

Mr. Betsinger would give $25 a year to get accurate statistics of the honey product. The different organizations might obtain it, if an effort was made.

Mr. Root was in favor of getting such information, and was willing to pay for it.

"*Is grape sugar valuable as food for bees to winter upon?*"

Reports are afloat, said the secretary, that experiments had been successfully made in its use. Is it prepared in the form of a syrup?

Mr. Root had seen an experiment. In this case the grape sugar was put in a dry state in the top of the hive and all honey removed. This was in 1872. The bees lived only thirty days. They lived three months on dry loaf sugar.

The chairman had found the syrup from grape sugar to candy in a few hours or days. Mixing honey with it retarded the candying process. He had never fed it.

"*What will be the effect upon the honey market of adulterating honey, and shall we countenance it?*"

It was agreed that the effect was uncertain. The secretary said some people would not buy candied honey, supposing it adulterated, when candying is a guarantee of purity. If it must be kept from candying, it must be adulterated.

"*What is the best method to promote early Breeding?*"

The chairman knew of no way to get a hive full of bees in March, or even as late as the 25th of May. He can get a new swarm the latter part of June, by furnishing plenty of uncapped comb, full of honey.

Mr. Locke said the largest swarm he ever had was a natural one, on May 10th.

The practice of spreading comb and supplying new has worked well with Mr. Root. He uses a very large frame. But this practice must not be carried too far. After apple-blossoms pass away he had often been compelled to feed heavily. We should see to it that there is always capped honey in the hives. We should not put bees out too early. He would not put them out before the soft maple is in blossom.

The chairman said it is a disadvantage to have the hives full of bees before there is any work for them to do.

Mr. House does not believe there is any advantage in early stimulation.

Mr. Van Dusen believed in having a good supply of honey for food. He frequently uncaps comb in the early part of the season. Heat should also be economized.

Mr. Betsinger would remove honey from the comb, put comb in empty, and thin the honey with water for feeding.

Mr. Root said care must be taken to give bees a supply of water.

Mr. House—In "spreading" great care should be taken by those not well posted.

THURSDAY, FEB. 7.

Vice Pres. Doolittle in the chair.

The Committee on Constitution and By-Laws reported in favor of making the membership continuous instead of having to be renewed from year to year. Adopted; and the alterations in Constitution and By-Laws ordered.

On motion, the Convention recommended all bee-keepers to sign the petition, now circulating, requesting Congress to so amend the postal laws as to permit the sending of queen bees through the mail.

The Committee on Bee-Papers reported the following, which was adopted:

Whereas, The *Bee-Keeper's Magazine* has unjustly charged bee-keepers with fraud in selling honey in glass boxes, and *Gleanings in Bee Culture* is depreciating the value of honey to the detriment of producers, and

Whereas, Most consumers demand that honey be sold in glass boxes, while it is evident that honey cannot be produced at the depreciated value quoted in *Gleanings*, and

Whereas, Said periodicals have taken arbitrary measures to the detriment of those interested, while we recognize the periodicals devoted to apiculture to be the mediums through which both producer and consumer should receive mutual benefit; therefore,

Resolved, That the North-Eastern Bee-Keepers' Association, now in session, do emphatically disapprove of the course pursued by said periodicals.

The secretary read a paper on overstocking, by James Heddon, of Mich.

Mr. Bacon said flowers come and go quickly. We need bees enough to gather the honey when it is ready, or it is wasted. If we have not enough to do this, the locality is not overstocked. He does not think 150 colonies will overstock a favorable locality.

Mr. House: Much depends on conditions. Some localities will sustain 150 swarms, while others would sustain few or none. As an average, 50 swarms are sufficient for one locality.

Mr. Root thinks that in any location, take the season through, 25 swarms will do better than 100. Yet, in some localities, with proper care, 200 or 300 will do well. He thinks there are 500 in his locality. But the larger the number, the more likely the necessity, at some portion of the season, for feeding. He favored locating in unoccupied sections.

Mr. Betsinger: Much depends on care. He has proportionately better results from a larger number of swarms than he formerly had from a smaller number.

Mr. Doolittle thought that the question of overstocking depended very much on the care or the want of care. He could not think 50 swarms would overstock a circuit of eight miles diameter.

Mr. House has had some apiaries, with the same care, yield 25 pounds to the swarm and others 100 pounds of honey. Much depends on pastures as well as on care.

Mr. Bacon wanted to know which swarms had the advantage of pasture.

Mr. House said he thought his home apiary, which made the poorest yield, had the best pasture. He laid their failure to overstocking.

Mr. Nellis thought that when all the circumstances were taken into consideration there would be less appearance of clashing in the experience of different beekeepers. When conditions are right, bees gather honey very rapidly. They do all their work within six weeks, at intervals during the season.

Mr. Betsinger thought overstocking impossible, as he could demonstrate by figures.

Mr. Perry had hunted wild bees, and had never yet captured a bee that had flown much over two miles. It takes a bee thirty minutes to go two miles, load itself and return, when it takes its honey from a box. It cannot, therefore, go four miles and make honey to any profit.

Mr. House's experience was similar to that of Mr. Perry.

Mr. Locke read the following address on

OUR OBJECT AND OUR MISSION.

Mr. President and Gentlemen:

Why have we met here? Are not our State and National Conventions the mouthpieces of bee-keepers, organized for their use and benefit? If so, we have met here to debate and decide upon the most remunerative management for the apiary.

How, then, can we best fulfil this mission? By presenting new ideas, and criticising all those introduced in a candid and gentlemanly manner. In this way can we obtain the information desired, and present the same to the thousands of bee-keepers who are looking to us for it—though unable to be present and take part in our deliberations.

The time has come when it is necessary for the apiarist to be the embodiment of system, and his apiary must have the best supplies and most competent help; and must be carried on systematically.

Profit in apiculture means hard work, and plenty of it. Instead of a few old gums and box hives, and brimstone for the bees in the fall, and *no* management—the present demands the best movable-frame hives, with large capacity for surplus, simple in construction, and admitting of ease and speed in handling. One that will winter well on summer-stands without further packing or protection; with entrance easily contracted or enlarged, and with a brood chamber that can be expanded at will.

Comb honey must be placed upon the market in neat boxes and good crates, and extracted honey in such a way as to drive all adulterations out of existence.

The people must be educated as to the value of honey and its uses, as well as how to keep it from granulating.

Consumers demand glassed honey-boxes filled with the nicest white comb honey. If this Association should adopt a standard box, and all members should put their honey into it, I believe it would further their interests vastly.

The suggestion of our President as to the gathering of statistical matter concerning crops, &c., in August is a good one, and should receive our earnest attention.

The great advance that apiculture has taken within the past two years ought to cheer and encourage us to renewed exertions for its welfare.

As our honey is gathered in about six weeks, it is essential that bees should be easily and rapidly handled; they should be in good hives and kept strong in numbers, with good queens, and then the best results may be expected.

With comb-foundation, one-third of the labor of comb-building is saved, and with the present prospect of the introduction of new races of bees during the present year—to infuse new blood into our stocks—when we meet again I hope we shall have good reports to make of the season's success.

Salem, Mass. SILAS M. LOCKE.

The nomination and election of officers followed:

President—L. C. Root, of Mohawk, received 42 out of 51 votes, and was elected.

Vice President—George B. Seeley, received 19 and G. M. Doolittle, of Borodino, 29, with a few scattering votes. Mr. Doolittle was declared elected.

Secretary—J. H. Nellis, of Canajoharie, received a unanimous election as secretary.

Treasurer—R. Bacon, of Verona, was unanimously elected.

Honorary Vice Presidents—W. E. Clark, George T. Wheeler, E. F. Wright, and C. C. Van Dusen.

AFTERNOON SESSION.

The retiring president, P. H. Elwood, read the following, as his

ANNUAL ADDRESS:

In an old book we read of a good time coming, when "swords shall be beaten into plowshares and the spears into pruning-hooks." But in neither sacred nor profane lore do we find allusion to the time when the latter shall be converted into that weapon which is said to be "mightier than the sword"—the pen! This, however, is the the modest task you impose on your country in calling for an address.

As we meet again after the successes and reverses of another year, I think it may be well to inquire why so many have come up to our annual gathering, at so great an expenditure of time and money? Are the receipts expected to counterbalance the expenditures? I apprehend this may be the expectation, for, although our business possesses other attractions, and an opportunity for mental work and improvement not found in other out-door occupations; nevertheless, bee-keeping, with the majority, is a matter of dollars and cents. So-called philanthropic motives may urge a few to sustain an association of this kind, but with the great majority "the bread and butter question" is a greater incentive.

What are some of the benefits to be derived from our Conventions? First, the social element is one that cannot easily be over-estimated. The hearty hand-shakings and greetings are expressive of a sympathy not to be recorded on a lettered page. This sympathy encourages us to extra exertions, sustains us in difficulties, and helps establish a class pride that is beneficial. A comparison of the results of the year's labor, prompts us to a good-natured rivalry, and a comparison of the ideas advanced in debate often arouse trains of thought that lead to important results. At our Conventions we meet those who contribute to our literature, and we judge of their ability and reliability, which helps us much, in future reading, in separating the wheat from the chaff. The written part of our Conventions is valuable, as coming from some of our most practical and successful apiarists, some of whom do not contribute to our Journals. The unwritten part is still more valuable. We usually gather together with some problem to solve, some point of practice on which we have not had enough experience to decide. We propound the question to those of more experience, and we come away confirmed or cautioned in our course of procedure. We talk of supply and demand, of over-stocking the market and over-stocking the land, and in a way not always encouraging to dealers in supplies. We sometimes question the propriety of advising every one to go into a business in which so much more has been lost than made, and in which, even at the present time, more goods are produced at a loss than at a profit. In short, we are at perfect liberty to express our views as we please, with "no one to molest or make us afraid."

Ex-president Bacon last year recommended co-operation in marketing honey, and in some form it undoubtedly is destined to produce the most satisfactory results. Many of us are annually compelled to market our products before knowing much about the aggregate production. Without this information we have no way of judging what the price should be. I suggest that measures be taken at this session for collecting statistics of the next crop in time for use in marketing the same. With suitable blanks furnished each member of this Association and to those honorary members who might be appointed and who would consent to collect statistics of the yield in their vicinity, we might be informed in August as to the total production throughout the country. This information would be of very great service to us all, as our markets are annually very much injured by parties who sell below the market price.

Our markets are also much injured by placing goods upon them in an unmarketable shape. This considerably lessens consumption, and I again assert, that it is to our interest to have the best packages used by all. Especially should we affirm, that the Eastern market prefers glassed honey. It presents a finer appearance, and in the retailer's hands the loss from breakage is so much less, that many dealers will handle no other. When you read, please remember that a very strong interest is at work in the East in building up a trade in unglassed California honey. I am sorry to say that one of our bee-publications is aiding in this work by recommending unglassed honey.

Whatever may be your conclusions as to the merits of comb foundation in the brood chamber, I trust you will return no uncertain verdict as to its use in surplus honey receptacles. That commercial beeswax is fit to eat no one familiar with its manufacture will affirm, and it is not expected that passing it between two corrugated rollers will affect its character in this respect. It is also well established, that bees do not sufficiently thin it. Heretofore comb-honey has been one of the things that could not be adulterated. It cannot now be, except by bee-keepers themselves! Shall that ever be?

Hoping that this session may be entirely harmonious, and that it may be as profitable as it is pleasant, I append an article you asked me for, two years ago, rather than to enlarge on some other topics I had expected to mention. P. H. Elwood.

President Root then took the chair. Mr. Doolittle read the following paper on

COMB FOUNDATION:

I am well aware that in presenting the facts, as given below, I shall be censured by those having comb foundation to sell, and perhaps by a few of our practical apiarists; but, as they are facts, just as I found them to be from practical experiments in my own apiary, I give them, being willing to bear the censure of a few, if I may be of any benefit to the many.

My first experiments were conducted in 1875, with foundation purchased of John Long, of New York city. The foundation arrived nearly at the close of the season, and as the weather was cool at the time, the result was quite satisfactory; we have some very nice specimens filled in boxes, with but little sagging. Although the foundation was not properly thinned, I had great hopes for the next year, as I thought with warm weather, the bees would properly thin the base of the cells.

The next season, 1876, I purchased a small lot of A. I. Root, of Ohio, and used it in hot weather; but was completely surprised to find, that while the bees did not thin it out any more than the previous season, it sagged so as to be entirely worthless; some even pulling apart after being filled with honey. But Mr. Root came to the rescue, by telling me that I had been experimenting with paraffine, instead of wax, as the foundation he sent me was made of paraffine, instead of wax.

He then sent me some, declaring it to be made of pure wax, but as the season was far advanced when it was received, I had but little chance to ascertain much about it, except that the bees did not thin the base of the cells a particle. They simply worked out the wax that was raised for the sides of the cells, leaving the base untouched, and although the weather was cool, it sagged some. So far, my experiments had all been confined to the boxes.

As I had some very nice wax of my own, I sent it to Mr. Root during the winter of 1876-7, to be made into foundation, 5 cells to the inch, for breeding purposes. Heretofore, most of the foundation had been made 4½ cells to the inch, which was neither worker or drone size of cells. In due time the foundation arrived, and my former ambition to make it a success returned, as I now had foundation known to be of pure wax, and made 5 cells to the inch.

As early as possible, in the spring, I filled some frames very nicely, taking the precaution given in the Bee Journal to leave it ¾ of an inch from the bottom bar of the frame and ¼ of an inch from the sides. A center frame was taken from a medium colony, and one of foundation put in place of it. After waiting 17 hours, I looked to see how the bees had made it, when, to my dismay, I found the comb torn apart, leaving only a portion of it in the frame; the greater part being in a mass, at the bottom of the hive. Not at all daunted, I put several frames in weak colonies, so as not to get so great a weight of bees on them at first, before the cells were drawn out.—These were not torn apart, but sagged so badly that the combs were all bulged, and rolled under at the bottom. Next, I shortened them up, so as to come within 1½ inches of the bottom of the frame. These sagged so as to just touch the bottom bar of the frame; and, upon measuring the cells, we found them to be 3½ one way, by 5 to the inch the other.

Meantime, Mr. Root was writing us to know the result of our experiments, so we sent him one of these combs. He wrote us back, that although the comb was the worst case of sagging he had ever seen, yet even as it was, it was better than natural comb would average! Didn't my hair stand on end, to think what combs my brother bee-keepers were using, while I had more than a thousand combs in my yard as straight as a board, with 5 cells to the inch, each way! I wrote him for a comb, built from foundation, the best of any he had; upon receiving and measuring it, I found it had sagged, so that the upper half averaged 4½ cells to the inch, by 5 the other way. This comb was in a Langstroth frame and was left ¾ of an inch from the bottom when put in, but had sagged so as to touch the bottom bar. As this was one of his best, I have a right to make a few figures on it.

When the foundation was put in the frame, it was just 5 cells to the inch, as the bees make theirs; having ¾ of an inch from the bottom bar—¾ of an inch, the whole length of the frame, is lost by this sagging process! As the Langstroth frame is about 17 inches long, we have 12¾ inches of loss to every frame, above what the bees would lose if they built it in the frame! As there are 10 frames in the Langstroth hive, we lose on the whole hive 127½ square inches, and as each square inch, if occupied with brood, would give 50 worker bees, we lose 6350 bees every 21 days; or, in other words, it takes just as many bees to brood these combs as it would natural comb, giving 6350 more bees every 21 days, or about 40,000 during the season! In early spring, when brooding bees are few in number, this loss of bees is quite an item.

We have also experimented with foundation in boxes, the past season, and by leaving it ½ inch short at the bottom, we had them filled so as to look very well; but when we come to the thinning process, we have yet to see a comb that the bees ever thinned the base of.

When we had visitors, we would purposely put honey on the table, built on foundation, to see them cut it. When the knife came to the base of the cells it was sure to stop, and, as a general thing, the cells on the under-side would mash down before the base would be cut. They generally asked: "What kind of honey do you call this?" It was laughable to see the rolls of wax laid on the sides of the plates!

I have also proved to my satisfaction that there is but about 2 days' difference in the time of filling a box, in the honey harvest, between a starter of natural comb and a box filled with foundation.

Thus far, I have said nothing about the expense of foundation, as compared with natural comb. As all parties agree that natural comb of worker size is just as good for the brood chamber, and drone size for the boxes, as can be obtained with the use of foundation; therefore, if we can produce natural comb for the same outlay of money, we have something that is just as good, (as admitted by all), as foundation, and I claim far superior to foundation, in its present state of perfection. From experiments conducted the past season, I am confident we can produce more square feet of natural comb than can be purchased by foundation for the same amount of money. I can buy a swarm of bees for from 3 to 4 dollars, transfer them to a frame hive and produce from 25 to 50 square feet of comb from them, according to the season, with no more trouble than is required to fuss with the foundation; besides, this is one of the best schools for a beginner to learn apiculture in!

Thus I have simply given the facts as I found them, and would advise all to experiment for themselves with a pound or two of foundation, and then, if they wish to use it, they can purchase more largely. I expect to have my wax worked up again this year for further experiments, and if I can devise any means to prevent its sagging, I shall consider it an acquisition for the brood apartment, to get all worker comb, *but for nothing else!*

I think no one should be enough of an enemy to himself and honey-producers generally, to use foundation in surplus boxes to the injury of our honey markets. Any one can satisfy himself that bees do not thin the base of the cells, by taking two pieces from the same sheet of foundation, large enough to fill a box. Fit one into a box, and reserve the other. After the box has been filled with honey, shave it down to the base, wash it and compare with the reserved piece; and, if any one can see any difference between the base of the two, it is more than I have ever been able to do!

I have not said that bees in Ohio do not thin the base of foundation, for I have never kept bees in Ohio; neither have I said that honey-buyers, in the city of Cleveland, would not prefer honey built on foundation, for I have never sold honey in Cleveland; but I do say, that if the use of foundation, as heretofore made, is persisted in for surplus boxes, it will ruin our honey markets here in the east.

G. M. DOOLITTLE.

President Root would not countenance the use of artificial foundation in the production of box honey, but thought there is gain in using it in the production of extracted honey.

Mr. Van Dusen had more confidence in its use in the brood chamber than anywhere else. He found the quality of the wax made quite a difference about sagging.

W. E. Clark had unfavorable experience with foundation. His bees tore it down, or else it fell of its own weight. It did better in the brood chamber.

Mr. Perry asked "if the sagging of artificial foundation enlarges the cells, what would be the effect on the characteristics of the bees hatched therefrom?"

No one answered.

Mr. E. D. Clark spoke from experience. He found that the machine made the arch on the wrong side; it gave no support. He finally got some foundation that gave complete satisfaction in the brood-chamber. About one queen in fifty rejects it. He thought as a rule it is not made heavy enough.

Mr. Doolittle had found that bees build their cells at all angles—sometimes with the angle up, and sometimes with the flat side.

Mr. Warner produced a sheet of comb, built from yellow foundation, from which Mr. Nellis cut specimens, which demonstrated that bees do thin artificial foundation. He cut out a piece where the comb was over an inch thick, upon which the bees had not added a particle of their own wax, in other words, the comb was perfected entirely from the wax supplied in the foundation. He prophesied its general adoption. Yellow wax will be made into sheets so thin and perfect that its use will not be detected in comb-honey, and said the action of this Association will be a source of amusement to the reader of the future. If hives are properly shaded, he does not think there will be any trouble about sagging. He has no difficulty in using it.

A paper from Capt. Hetherington, of Cherry Valley, on artificial foundation, was read by Mr. Ellwood.

Mr. Bacon now, as last year, condemned the use of artificial foundation in surplus boxes. Consumers do not want to chew beeswax. In the brood-chamber it is well enough to use artificial foundation.

Mr. Ellwood had no success in using foundation in his surplus boxes. From this fact and his observation, he thinks it one of the biggest humbugs of the age. He does not think it worth what it costs for use in the brood-chamber.

The following resolutions were then adopted:

Resolved, That we, the members of the North-Eastern Bee-Keepers' Association, in Convention assembled, after another year has passed in experimenting with comb foundation, do hereby reiterate our verdict of last year, that we do most emphatically condemn its use in surplus boxes.

Resolved, That the use of comb foundation in the brood-chamber be recommended.

Mr. Curtis, of Utica, gave the Convention the following statistics, showing the production of honey in the State in 1874, according to the last State census: In the State, 1,469,318 pounds, of which the county of Steuben produced 109,319 pounds; Onondaga, 77,336; Ontario, 69,179; Otsego, 56,862; and Cayuga, 47,448 pounds. The total production of honey in the State in 1869, according to the United States census, was 896,286 pounds. Our State production of maple sugar in 1875 was 9,272,702 pounds, and 240,023 gallons of syrup.

Adjourned to 10 A. M., Feb. 8th.

[The last day's proceedings and the statistical table will be given in our next issue. —ED.]

Foreign Notes,

GLEANED BY FRANK BENTON.

A new edition of Dr. Dzierzon's work, "Rational Bee-Culture, or Theory and Practice of the Silesian Bee-Keeper," has appeared.

◆

With the title, *Schlesische Bienenzeitung*, the apiarian society, of Silesia, Prussia, has recently founded a journal to be devoted to bee-culture.

◆

Two foreign journals say that the chimney swallow destroys large numbers of bees. Similar statements may be found in the works of Virgil, Nikol. Jacob and Von Berlepsch.

◆

☞A. Gadillot, Bordeaux, France, writes: "The French produce very fine honey, but as far as the style is concerned, they are away behind that of the United States. I therefore hope for a fine exhibition from the U. S., at the Paris World's Fair."

◆

"With him who possesses no knowledge of bees, or natural fitness for the work, bee-culture succeeds only as long as the bees thrive of themselves without culture. When this is no longer the case, the usual verdict is:—'I have no more *luck* with bees.'"

G. DATHE.

◆

ERRATA.—On page 40, of the AMERICAN BEE JOURNAL for January, Herr Cori is made to say, "I like the liberty of expressing my views here," instead of "I take the liberty, etc." Instead of $1825, a decimal point between the 1 and the 8 makes the annual salary of S. H. Rykeus $1.852, a sum that would likely no more than supply that worthy native of Holland, and his family with a fair amount of salt for the year.

◆

The apiarian journal, formerly known as *Der Elsæssische Bienen Zuechter* appeared in January, under the title, *Der Elsæssisch Lothringische Bienenzuechter* (*L'Apiculteur Alsacien Lorrain*), with the announcement that the apiarian society of Alsace, and that of Lorraine, had been united, and with a hearty greeting to all the members of the Society of which it is the organ, to its numerous contributors, and to its exchanges. Success to this interesting periodical.

Baron Von Berlepsch.

In a memorial of Baron Von Berlepsch, R. Mayerhœffer, editor of *Bienenvater*, of Bohemia, remarks:

"Berlepsch's apistic and general knowledge was colossal; he was an admirable master of the ancient languages, Latin, Greek, and even Hebrew. What a pity he lacked the knowledge of modern languages! His views were narrowed, for he was deprived of the apiarian knowledge of other cultivated people; he valued too highly that of the Germans; and so, unwittingly, he helped to increase the German bee-keepers' self-esteem, for which, however, he received few thanks."

In closing, Herr Mayerhœffer says: "If we glance over the work of Berlepsch, we must admit that it constitutes a marked epoch—not only for the bee-culture of Germany, but also for the whole bee-keeping world. Berlepsch will ever be held in remembrance, for he has reared for himself a monument that outlasts marble and iron. As long as bees exist and man cultivates them, so long will the name of Berlepsch be heard."

◆

At its coming session, the Agricultural Society, of France, will order a silver medal for the discovery of the most efficacious and easiest method of decreasing the brimstoning of bees.—The most certain way of getting rid of the practice of smothering bees, as well as getting rid of briars, dog-grass, etc., is to scatter information widely.—What would throw the most light upon the subject would be the publication of a succinct treatise on the rational method of managing bees, to be circulated extensively. In the year 1777, *l'Academie imperiale et royale des sciences et belles-letters* of Brussels, wishing to extend apiculture, brought up the question of the best methods in the culture of bees. They gave time and means to the subject. In 1779, there appeared three works, which are still of greater value than some pretentious books, published in our day. These works were put in print, and their circulation was secured by fixing the price low. The Agricultural Society, of France, which contains all the prominent agriculturists, has here a good example to follow.—*L'Apiculteur.*

◆

ARTIFICIAL POLLEN.—The *British Bee Journal*, in referring to the kinds of flour which can be used as substitutes for pollen, gives the preference to that made from peas.

Exhibitors would like to know at what time they should send articles to the Trocadero. It is difficult to say.—The structure, which is to contain the products placed under Class 83, will not be constructed until the close of winter. It is probable that exhibitors will be notified to send articles early in April. A large number of industrial exhibitors have addressed to the Minister of Agriculture and Commerce a petition, which raises an important question, relative to the organization of the jury of awards for the Exposition. The following is the text of this petition: The undersigned, French exhibitors, at the Exposition of 1878, have the honor to request that the French members of the Jury of awards for this Exposition be, (at least, the greater part of them), nominated for election, by the exhibitors themselves, as is the case with those of the fine art department. They hope that you will permit this manner of proceeding, which, guaranteeing independent and competent judges, would put the jury beyond the reach of unjust criticism and accusations." We think that a great majority of the exhibitors in Class 83, will unite in this proper request, upon which it will, no doubt, be adopted.—*L'Apiculteur, Paris.*

The following question was asked at the twenty-first convention of German and Austrian bee-culturists: "What experiments have been made, since the last convention, with colonies of bees located in the open air without hives?"

After Herr Guehler had stated the results of his experiments with colonies of bees, situated without hives in the open air, he drew the following conclusions:

1. The lack of hives has *no* influence on the production and development of brood.
2. The yield of honey is not diminished.
3. There is no greater chance for robbing, as the robbers are quickly driven away.

The speaker dwelt upon the importance of this last point, because it indicates that one ought not to make the entrances very narrow, and that when robbing has already commenced it would be advisable to turn the hive about, in order to rouse the whole colony to action. But what is most important, in a practical way, is this:

4. Bees have no need of water during the winter. When they collect water, or when they search for it, is when they find themselves in an abnormal condition. They are able to preserve a medium and uniform temperature during winter, but the hive should be protected against dampness.

Dr. Dzierzon considered the experiments of Guehler interesting and important for practical bee-culture; not that one would be able, practically, to establish his colonies in the open air, without hives, but because these experiments prove that cold is not injurious to bees. Then, one can give some ventilation constantly.—*Trans. from a Foreign Report.*

L'Apiculteur says, relative to a report published in the *Journal de Saint Petersburg*: "At the meeting of the Economic Society, of St. Petersburg, held Nov. 24, the statements of Prof. Boutelerow, an expert apiculturist, were listened to with great interest. It appears that the bees of Italy, so praised by our apiarists, particularly for the 'mildness of their disposition,' are likely to be dethroned by bees which M. Boutelerow has brought from Caucasus, (to which place he recently made a voyage), and which are more productive and still more gentle in disposition than Italian bees. They wish to make of these bees an article of exportation, hoping for excellent profits from it; but, according to communication made to us, the managers of railroads object to transporting them. The Economic Society should have resolved to enter into conference on this subject with the managers of our railways."

APIS DORSATA.—Mr. Gravenhorst, of Germany, gives his opinion of the Javan Bee, as follows:

"*Apis dorsata* is not at all suitable for culture. Its honey is not particularly agreeable to the taste; then, too, it stores up but little. The combs of this bee are quite different from those of our honey-bee; it does not build them perpendicularly, but horizontally, after the manner of wasps and hornets. From this, it is to be seen that this bee can accumulate no great store.

"For this information I am indebted to Mr. Rykens, a Hollander, who was sent by his government to the island of Java. Instead of cultivating *Apis dorsata*, they propose to introduce the Italian and Cyprian bees there, and, to this end, these bees were sent, on the 2nd of October, 1877, to Java.—Rykens took with him 24 Italians, 2 Krainer, and 2 Cyprian colonies. He sailed by steamship from Helder, in Holland, and, *via* Suez canal, arrived at Java in seven weeks." C. J. F. GRAVENHORST.

Our Letter Box.

Lonoke, Ark., Feb. 11, 1878.

"I see Mr. S. Scott Hammitt asks where bee-pasturage is good and land cheap.—Here in Lonoke Co., anywhere on this beautiful prairie he can find what he asks for." I. D. Lee.

Boundary City, Ind., Feb. 1, 1878.

"I have 9 colonies, (3 Italians and the rest blacks), all but one in American hives, on their summer stands, covered with hay. Over the frames there is a double quilt and chaff cushion. Next season I shall make all two-story hives. The imported queen you sent me is a nice one; I am perfectly satisfied with it." D. W. Knoll.

Milledgeville, Ill., Feb. 4, 1878.

"I am among the many who are glad that the American Bee Journal fell into the hands of those who have no 'hobbies to ride,' or 'axes to grind'—to make money by—well stealing others' inventions and selling without even giving credit to whom it is due. I am only expressing the views of many readers." F. A. Snell.

Plainfield, Ontario, Jan. 16, 1878.

"I put into the cellar, one year ago last fall, 32 colonies; one I lost, and one was queenless in the spring; I doubled it with another, leaving 30. The increase was 32, sold four, have 58 in cellar in good condition. Last summer was not one of the best of honey seasons; basswood honey lasted but 6 days; the fall crop came in good. I sold my honey at from 12 to 12½ cts. per lb. I use the 'extractor'—no boxes. The principal sources of our honey are from white clover, basswood, buckwheat and golden rod."

Arch'd Parks.

Westfield, N. Y., Jan. 16, 1878.

"To winter bees with success, we must give ventilation, and yet, not have a cold current of air through the hive. I carry them in as soon as it shows signs of cold weather; open the box holes, and front entrance, and put the cap on the hive; put the hive where it does not freeze. I winter in a house with a wall one foot thick, and it never freezes. I winter with marked success; hardly ever losing a swarm. Bees did very well here, considering the dry summer." Franklin Hardinger.

Carlinville, Ill., Jan. 29, 1878.

"I commenced with two box-hives in 1867; got Italian queens for them; and bought 3 more box hives, in 1869. I worked along as I had time. (Have been assistant postmaster for 8 years, and have not had much time to devote to the bees). I raised many fine queens, mostly for my own use, but sold a few to persons in this and adjoining counties. I built a house apiary in 1875; last season, I got about 4000 lbs. of honey, extracted and comb, in 1¼ lb section boxes. We now have 95 or 96 colonies in the house, in good condition. We have a Barnes Saw, run by horse-power, which is the very thing for hive-making. We have used it 2 years. We have 500 section frames filled with combs, ready to go in the hives; also a foundation machine and all the modern implements for the business. I am now out of the post-office, and shall devote all my time to bee-culture. With over 10 years experience, and all my time, I have no fear of the result." J. M. Valentine.

Uniontown, Pa., Jan. 24, 1878.

"Having read the American Bee Journal from its commencement till now, I will say that I think it was never managed better than at present. Our honey season is only about 6 weeks. Our surplus is almost exclusively white clover honey.—During the short season good colonies will fill their hives, and from 6 to 12 boxes of surplus. Last spring, 2 May swarms filled 6 boxes each, and swarmed in June. I purchased Italians, 12 years ago, of Mr. Quinby. Three years ago, I got some of J. Oatman & Co. They have crossed with the natives, but work vigorously—though they are a little cross. I find much pleasure, as well as profit in the business. Our honey is superior to any I have ever seen, either east or west. I wish success to the Bee Journal." J. T. Smith.

Plainfield, Ont., Jan. 17, 1878.

"I saw in the July (1877) number of your excellent Journal, an article, 'How to Prevent Increase by Exchanging Stands.'—I have tried the plan there recommended, by changing seven hives in one day, and find it 'works like a charm;' but feel convinced that it is more owing to the place where the hive is placed, than to the particular color of the hive. Bees are scarce in these parts, owing to the way which people will continue to keep them. I was asked, last summer, to examine some large hives, of a neighbor, and found them completely filled with millers and moths. The hives, I should judge, would have held from 100 to 150 lbs. of honey, each, and the loss sustained could not have been less than $16; and yet, Mr. Editor, is it not strange that people will persist in keeping bees to be tormented with moths and millers, and a 'brimstone pit?' Those who should receive the benefit are but idle spectators; apparently careless whether moths, millers or bees gain the supremacy and inhabit the hive. A neighbor of mine has kept a swarm for 3 years, and has not yet received one pound of honey from it. It is true, the bees have swarmed many times, and made large quantities of comb and honey; but as yet, there has been enough for the millers only, which have successfully driven out each swarm from its hive." A. Parks.

Ashmore, Ills., Feb. 5, 1878.

"I have 52 stands of bees, Italians and blacks, in good condition, on their summer stands. I like the Italians best. I have been keeping bees for fifteen years, and have read many bee papers and books, but place The American Bee Journal ahead, and don't see how I could get along without it. I wish The Journal could reach every energetic bee-keeper in the land." W. L. Boyer.

Borodino, N. Y., Feb. 19, 1878.

"I intended, at the beginning of the present year, to write an article each month, for all three of the bee papers, and, also, to answer all correspondence, but I am unable to do so, on account of a severe attack of the rheumatism. My correspondence has grown so large as to occupy from 2 to 3 hours every day, and, although it is pleasant to answer all questions pertaining to bee matters, yet my time and health will not permit. Therefore, I shall have to say "good bye" to our much loved Bee papers, and correspondents, for the present."

G. M. Doolittle.

[We are sorry to hear of friend Doolittle's indisposition, and trust it may be of short duration.—Ed.]

Naperville, Ill., Feb. 13, 1878.

"I put 108 swarms of bees in the cellar, last fall; they have not been as quiet as in colder winters. I worked 50 swarms with tin separators between the sections, without guides, last summer; and found if I had not guides or starters 2 inches long, they were apt to build from one separator to the other, running the combs just the way we don't want them; and, of course, always attach them to the separators." C. Kendig.

[Of course, guides are quite essential; a strip of wood, a little wax run along the centre of the top bar, or a *small* piece of foundation will be advantageous in any surplus arrangement.—Ed.]

Fond du Lac, Wis., Feb. 9, 1878.

"Last spring, I bought 6 swarms, in box hives; transferred them into movable frame hives, of my own make,—double boxes, with frames 12x13 in. Transferring was done carelessly, and it set them back considerable. I lost 2 swarms, leaving 4 in all. I made, during the season, by using comb foundation, 14 good swarms, which are on the summer stands, surrounded with boxes, and packed with fine shavings. On the 3d inst. bees came flying out thickly, on account of the fine weather. I examined some of the hives and found them in good condition, with plenty of honey. The surplus honey, made during the past season, was about 300 ℔s." C. Olm.

Byron, N. Y., Feb. 9, 1878.

"I see, by the February number of the Journal, that to 'accommodate all,' you conclude to call the Section Box, the 'Phelps - Wheeler - Betsinger - Barker and Dicer Sectional Box.' I agree with you that 'for short' it should be called the 'Prize Honey Box.' By refering to my article, (Sundry Items), page 84, in the Journal of Oct., 1873, you will find the following paragraph: 'Last season, I had a hive arranged with section boxes, for trial.' This refers to the season of 1872.—During the fall of 1871, I applied for a patent on a bee hive, (granted Feb. 20, 1872), and sent with model of same, section boxes, arranged on both sides of the brood chamber. This would bring me in ahead of some of the names mentioned above, on the sectional box business. I use these sectional boxes, a case on each side of the brood chamber, holding 1 doz. sections; also, one directly over same, with 15. Size, 5x6. I glass up, after taking off. Our bees (82 colonies) are wintering well on summer stands." J. E. Moore, *Sup't.*

[We cheerfully add friend Moore's name to the list. It grows astonishingly.—Ed.]

Woodville, Miss., Feb. 6, 1878.

"I have succeeded in cleaning up the ground about my hives. Almost all my colonies are heavy with honey. As soon as the bees commence to fly I shall feed them some dark honey I have on hand. On the 2d inst. the spring huckleberry commenced to bloom, and the elm and maple look as if they would bloom in a few days."

Anna Saunders.

Ft. Atkinson, Wis., Feb. 11, 1878.

"I put 57 colonies into winter quarters, the last of November, and with one exception they are doing well. I put 40 of Dr. S. J. Sawyer's colonies into my house, and there is 28 or 29 of them dead already, and it is doubtful about the rest. I think the honey was taken from them so late that they stopped breeding too early, and so died of old age. They were kept on shares last summer by G. W. Merryatt, formerly of Milton, Wis. I winter in a house, made anti-freezing with tan bark walls, sides and top." L. M. Roberts.

[Reference was made to G. W. Merryatt, on page 60 of our last issue. It appears that he acted quite dishonorably with Dr. Sawyer's bees.—Ed.]

Lamont, Mich., Feb. 7, 1878.

"I have put 20 colonies out for a fly. It has been 60° fahr. for several days. I have lost 7, probably through being too warm and uneasy. The colonies are very strong."

M. W. Goodno.

Garden Plain, Ill., Feb. 15, 1878.

"In looking over the reports in the back numbers, this winter, I find some winter with only a very few dead bees to the hive. I have wintered in the cellar; for the last 4 years, have wintered in a bee house, but cannot winter with so few dead bees. I have, this winter, swept out at least a bushel of dead bees from 110 swarms; all that was strong, last fall, are in nearly every space between the combs, but it may be they did not count what was on the floor. I have a number of hives with, probably, not half a handful of dead bees in the hive; but they have been carried out and dropped on the floor, and some of the old or diseased bees flew out and died. So far as I can see, at present, my bees are wintering splendidly, except 2 swarms, and from some cause they begin to show signs of dysentery. It has been hard to keep the temperature low enough this winter, and I have had to leave the door open at night a great deal of the time, and, if the weather continues mild, will have to put a part of them out soon; even if I have to carry them in again." R. R. Murphy.

Charles City, Iowa, Jan. 30, 1878.

"A man, by the name of Harrison, came here this winter, professing to be a scientific apiarist, from Independence, Iowa,—but in reality being a regular dead beat. He professed great things, but when cornered, left for parts unknown, having boarded with a widow here and failed to pay his bill."

LEVI SUTLIFF.

Waupaca Co., Wis., Feb. 19, 1878.

"No snow. Not one day's sleighing, so far this winter. Bees flying every few days. Doing well, I think. I have part on summer stands, protected by a box, with 1 foot of chaff all around and over them.—More are in a small room in the cellar. Do not like to risk too many out of doors, as I believe the cellar the best place for bees in this northern country. This winter is the only one I ever saw so mild. Usually we have from 20 to 60 days continued cold, and most of the time about zero, and often from 20 to 40° below."

J. E. BREED.

Monmouth, Ill., Feb. 18, 1878.

"I put 125 colonies in the cellar Dec. 3, and they will remain there some time yet. The temperature has ranged from 42 to 56°. They seem to enjoy it, as though it was a long "summer night," Some have a pint of bees at the entrance. They had 40 to 60 lbs. of honey to the hive."

T. G. MCGAW.

Columbus, Kan., Feb. 18, 1878.

"I have on my place about 300, cultivated, eight years old, soft maple trees; a great many of them are now in full bloom, and are literally swarming with bees in search of pollen. We have two prairie plants in full bloom; very valuable for pollen. Two years ago, my bees gathered it in January, but it was frozen to death in February."

H. SCOVELL.

Madison, Ind., Jan. 12, 1878.

"I called the roll, in my apiary, last week; all answered to the knock. I use the Faulkner hive, with frame 10x16½ inches, and surplus room for 216 lbs. of box honey, around and over the brood chamber. This space I pack with straw or chaff, and winter on summer stands. I use White's extractor—the best I ever saw. When extracting is over, I have no straining to do, but draw it off and store away. Many bees are dying in this part of the state; I am not fully satisfied as to the cause; many bees left the hives during the warm weather of last month, and never returned; those left, died among the brood combs and honey."

B. V. MCKINLEY.

◆

Write names and addresses plain—giving County and State.

◆

We have gotten up a "Constitution and By-laws," suitable for local Associations, which we can supply with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 is ordered, they will have a blank left for writing in the name of the association, etc. A sample copy will be sent for a 3c. postage stamp.

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DIVISION BOARDS.—Several have written us, stating that Mitchell has a patent on division boards, and asking if they would be safe in using them. In order to get at the *real* facts, we wrote N. C. Mitchell to state his claims. He has sent us a copy of his patent, which decides the matter beyond controversy.

After describing his invention, in full, he sums up by saying, "What I claim as new and desire to secure" by letters patent, is:

1. *The herein-described bee-hive, consisting of the comb-frames C, partitions D, provided with the rubber or woolen strip b, and lugs a, sliding platforms e, and jars E: when the several parts are arranged to operate substantially as herein described, and for the purpose set forth.*

2. *In a bee-hive constructed as herein described, the partition D, provided with the woolen or rubber strip b and lugs a, substantially as and for the purposes set forth.*

In order to patent anything, there must be a *combination of parts*—one piece cannot be patented. Hence Mr. M. claims a board with lugs, (*i. e.*, movable irons, screwed on it, to raise or lower it at the bottom), and a woolen or rubber strip at the sides.

Those wishing to use a plain division board can do so without the least interference from this patent.

◆

☞ We have received a pair of Comb Foundation plates of C. Finn, Des Moines, Iowa. They make, by passing sheets of wax between the plates, comb foundation 8x8, 5 cells to the inch. They cost $10 for the pair. He is also getting up some plates for drone size, 6x6, which he will be able to sell for about $7. For a *small* and *cheap* device, these plates will answer the purpose —but cannot be expected to equal the higher priced machines.

☞ Geo. H. Mobley, Nevada, Mo., gives us the particulars of a "sell" among his neighbors. He had a runaway colony, led by a choice queen to the woods; a neighbor said he had discovered the "bee tree," where his bees were lodged; they struck up a trade like this: He was to give the neighbor a swarm in the spring, for the information. The tree, however, belonged to a third party, and another trade had to be made for the tree; the second party agreed to give the owner of the tree the first swarm from his swarm that friend M. was to give him; and in addition to this, he was to work up the tree into stove wood.—When the tree was "felled," not a bee, or cup of honey could be found. Now, friend M. wants to know, which one was "sold" the worst. We certainly think the poor fellow who had to cut that large tree into stove-wood had a little the *keenest* "sell." He works for nothing, and gets no swarm of bees.

"Bee-keeping of to-day," is the title of a little pamphlet of 62 pages, by W. L. Reed, Macon, Mo. It contains, in brief, just what the beginner needs—information on the various manipulations in the apiary. Of course, it is intended for such, and it will do a good work.

☞ The Excelsior Foundation Machine, mentioned in the February number as the Bourgmeyer Foundation Machine is, manufactured by C. Olm & Co.—Mr. B. beingga member of the firm. This machine is being thoroughly tested, and so far has operated well. Should any part, however, not stand the test, the firm stand ready to improve it until it does. They now ship two iron rollers (an extra machine), without extra charge so each purchaser, to be used in bringingall sheets to an even thickness before running them into foundation. It is advertised in another column. It does not make wax sides to the cells—and for comb-honey this is quite an improvement, as it can be made thinner, obviating the "fish-bone" difficulty. We can supply the machine at manufacturers' prices.

☞ Our new "Illustrated Catalogue of Implements for the Apiary" is ready, and will be sent to any address, postage paid. For the accommodation of bee-keepers wishing to purchase supplies, we keep almost everything that can be purchased anywhere, and sell at manufacturers' prices. We have no interest in anything, other than a retailer's profit, and will not recommend any article except on *real* merit. Being located in a great centre of business, it is sometimes very convenient to get goods of different manufacturers all at one shipment. Except in a few instances, we ship either from this office or the manufactory, whichever is the nearest to the purchaser.

Honey Markets.

NEW YORK.—We quote as follows:

HONEY.—In the general and unprecedented shrinkage of all values, honey has shared the fate of all produce—all Capt. Hetherington's, Mr. Doolittles's, Elwood's white honey has gone into consumption at 25c. per lb. We quote white honey, in sundry style of caps and crates, 15 to 17c. Dark grades 8 to 12c. Strained honey, in firkins—light, 10c; dark, 8c.

BEESWAX.—The market for wax is in no better shape, demand being light. Quotations, 27 to 28c. Exports for week ending Feb. 23, 11,520 lbs; do. from Jan. 1, 27,283 lbs; do. same time last year, 8,821 lbs.

H. K. & F. B. THURBER & Co.

CHICAGO.—We quote as follows:

HONEY.—The market is liberally supplied. Good to choice white comb sells fairly at 12 to 14c. per lb.; common to fair at 10 to 11c. per lb.

BEESWAX.—In fair request at 27 to 35c. per lb. for prime choice yellow.

SAN FRANCISCO.—

Feb. 13, 1878.—We have had heavy rains, which insures bee pasturage in the Southern counties, and a large crop of honey. We quote: Comb, crop of 1876, at 14 to 15c; crop of 1877, 18 to 20c. Strained, 9 to 12c. Beeswax, 30 to 31c. STEARNS & SMITH,

CINCINNATI.—Quotations by C. F. Muth. Comb honey, in small boxes, 15@20c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz., $4.50; per gross, $50.00.

LOUISVILLE.—Quotations by B. B. Barnum.—I will pay for choice, light, extracted honey 8@10c.; for white comb 12½@15c., in small boxes.

Gregory's Seed Catalogue.—Our readers will find the catalogue of J. J. H. Gregory's well-known seed house advertised in our columns. To handle seed with such conscientious care as to dare to warrant their freshness and purity, is of that class of bold, brave acts which the public appreciate. Though the warranting is of necessity limited to refunding the value of the seed purchased, still, under it, Mr. Gregory must sell good seed or make a dead loss. We have received a pamphlet on the culture of carrots, mangold wurtzel, and sugar beets, just issued by Mr. Gregory, showing how to raise, keep, and feed them.

☞ We keep Prize Boxes and Crates in stock at this office, and can supply orders, without delay, lower than the lumber for a small quantity can be bought for, in the country. See prices on last page of cover.

☞ Many complain of the dearth of small currency, all over the country. In reply to correspondents, we will say that *Postage Stamps*, of any denomination, can be obtained at every country post-office; and we will receive 1, 2 or 3 cent stamps for anything desired from this office.

How to Winter.—Those who wish to post up on the subject of wintering, will do well to read Prof. Cook's essay as read before the National Convention of last year.—It was published in the December number of 1876, and has since been re-published in pamphlet form, with the other essays.—Price 15 cents.

THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, APRIL, 1878. No. 4.

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Editor's Table.

☞ We have sent the Petitions to Congress concerning the sending of Queens by mail, and had several letters from Congressmen, stating that they will do all they can to have it incorporated in the new Law about to be presented to Congress.

☞ Under a false impression, friend King said some unkind things concerning us in the *Magazine* for March. As he corrects the statements and apologizes therefor in this month's *Magazine*, we will simply say—"Tis well."

☞ Friend Hedden remarks in his article on marketing honey, in this issue, that "what we most need is uniformity and attractiveness in our packages." Never was a fact more concisely stated. These words, "attractiveness" and "uniformity," are the keys to the situation.

☞ C. O. Perrine, we learn, has completed his arrangements for a floating apiary on the Mississippi River—and with his skill and shrewdness, we have no doubt he will make it win—unless a drought or something of that sort takes place. He intends to ship honey direct to Europe, and get an early start.

☞ Our friends have deluged us with articles and letters during the past month—but hundreds of them are destined to wait for want of room. Let no one think that theirs is put over because we *prefer* others. This is not so; often we found the Department full before one-quarter of those prepared for it were "set up"—and thus, often the *best* remained. Be patient with us, friends, and you may *all* speak to one another through the JOURNAL.

STRANGE !—On March 27 we received a postal card, written March 14, reading thus:

FRIEND NEWMAN:—"I sent you, Feb. 1st, by registered letter, my subscription for the AMERICAN BEE JOURNAL, for 1878, and for *Arthur's Home Magazine*. Have you received it?"

As this contained neither name, post-office, county, nor state—and as the post-mark is only a blot, it is impossible to tell—but we think we did not receive it, or the writer would have our receipt. If he will give us his name and post-office address, it shall have immediate attention.

Cedar Falls, Iowa, March 3, 1878.

MR. EDITOR:—"I would like to enquire how those who advise keeping bees in their winter quarters until late in the spring, when forage is plenty, manage to keep their bees quiet and in their hives? Our bees, here in Iowa, are very much inclined to get up, rub their eyes, and stir themselves when the first warm days come." E. E. STARK.

Just so; "They all do it," and everywhere the same. The only remedy is to keep them cool. A little ice, near by, will cool off the atmosphere quickly.

MR. EDITOR:—"I would like to enquire: 1.—In case one colony of bees is affected with foul-brood, are not the other colonies of the apiary liable to take the disease? 2.—Can hives, that have been effected with foul-brood, be used again with safety; and, if so, what is the process of purifying them?" ENQUIRER.

1.—They are. 2.—We should not like to use such hives; fire will purify them the best.

Noblesville, Ind., March 7, 1878.

"I bought 4 colonies last fall; they wintered well in the cellar; a few have died; the hives inside are very dirty, *i. e.*, have something that looks like crumbled comb. Why did they die? The hives that I received from you were very nice." L. M. WAINWRIGHT.

They were probably queenless, and had no brood to raise a queen from. She might have been killed while moving them. The 'dirt" you speak of seems to indicate that the combs were broken down, and the bees had been engaged in repairing them—hence the yellow dirt.

"When should Melilot clover be sowed? Please say in next JOURNAL." W. Z. M.

Sow in April or May, with any kind of grain, on any kind of soil. The earlier the better. It does not bloom until the second season, generally from July 1 to 10, but it remains in bloom from 60 to 90 days. It is an excellent honey plant.

We are in receipt of Nellis' Catalogue of Seeds, Plants, Bulbs, &c., for 1878, together with some samples of choice Seeds. He sends a sample of very desirable flower seeds with each catalogue, free to any who write for it. His address is A. C. Nellis, Canajoharie, Y. Y.

☞ We have received hives from G. W. Zimmerman, J. Oatman & Co., and Sperry & Chandler for our Museum, and intended to have given each a notice this month, but cannot for want of space till our next issue. Also a uni-comb observatory hive, from Sperry & Chandler, and several other things, which much interest our visitors.—As we have several other things now on the road, in our next we will make a "chapter" of it, and notice them all.

☞ Friends Dadant have sent us their Circular and Price List for 1878. They intend to import Cyprian, Corinthian and Java bees through Ginseppe Fiorini, in Italy, and will inform our readers in due time about their success with them.

☞ The Catalogue of Krætzer Bros. & Stauber's Concord Bee-Hive is on our desk. It contains much information that will be useful to the uninformed, and a complete Price List of the Concord Hive.

☞ Bees have wintered splendidly all over the country, and everything bids fair for a profitable honey season. The season is fully a month in advance this year.

☞ Correspondents should be careful to sign their name, and write their Post Office and State plainly. Many neglect this and hence are left to wonder why they get no answers to their letters or postal cards.

H. Scovell sent us a package, said to contain plants—but when it was received, the wrapper *only* was left. It was pasted, with the ends open. Such should be wrapped and the ends closed; and tied up with string, when letter postage is not paid.

☞ On page 72 it was stated that the walls of friend Dunham's bee-house were filled with *bran*—it should have read brase; coal-brase is a fine kind of charcoal. On page 92 the word "friend" was omitted in the first paragraph of P. H. Elwood's address, after "your country." In his hurry of writing it, the word was omitted. On page 76, 15th line from top, for the word owners, read *ounces;* a typographical error.

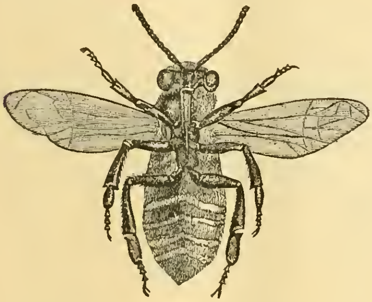
New Lisbon, Wis., Feb. 18, 1878,

"The bee-keepers of the north-western part of this state met at New Lisbon, Feb. 16, and organized the North-western Wisconsin Bee-Keepers' Association, and elected the following officers: President, J. R. Winkler; vice president, J. Boylan; sec'y, M. S. Clark; treasurer, J. Morrill, All reported their bees coming out of the winter quarters in good condition." M. S. C.

Production of Wax and Comb.

This subject is an intensely interesting study. Before the time of Huber, it was generally supposed that wax was made from bee-bread; but Huber fully demonstrated that bees could construct comb from honey without the aid of bee-bread. But, oxygen, being the support of animal heat, *is essential* to bees while building comb, because an extraordinary amount of heat must be generated to enable them to soften the wax and mould it into such delicate forms.

We herewith present a cut of the under surface of the Bee, showing the wax formations between the segments:



Dr. Donhoff states that in new comb the thickness of the sides of the cells is but the 180th part of an inch! Such delicate work is hardly conceivable; and yet, bees often make it in the dark, on cool, cloudy days or in the night—appearing never to rest.

Prof. Duncan, (professor of Geology), in King's College, London, in his work on the "Transformation of Insects," remarks as follows on this interesting subject:

"The production of wax is one of the most remarkable physiological phenomena of the organization of these *Hymenoptera.* It was generally thought, formerly, that the bees disgorged their wax from the mouth, and Reaumur certainly held this opinion; but John Hunter discovered the manner in which the wax was formed; and it is now evident that the bees carry within themselves this important building material.—The segments of the abdomen of bees overlap from before backwards, but when the margin of one is lifted up, two broad and smooth surfaces will be noticed on the uncovered surface of the next wing; these surfaces maintain during one part of the year two thin, white, and almost transparent laminæ, which are really composed of wax. The wax is really secreted by some small glands which are within the abdomen, and it transudes through the soft and smooth integument between the rings or segments. It would appear that the sugary matters which are sucked and digested by the bees are to a great extent transformed into wax, which is to all intents and purposes a sort of fat."

A writer in *Scribner's Monthly* thus describes the manner of comb building in a new swarm:

"When a swarm of bees is about to leave its old home and seek another, each bee fills itself with honey. After entering their new home, the gorged bees suspend themselves in festoons, hanging from the top of the hive. They hang motionless for about 24 hours. During this time the honey has been digested and converted into a peculiar animal oil, which collects itself in scales or laminæ beneath the abdominal rings. This is the wax. One of the workers, called the founder, then draws from its own body, by means of its clawed foot, a scale of wax. This it breaks down and crumbles, and works with its mouth and mandibles till it becomes pliable, and it then issues from the mouth in the form of a long narrow ribbon, made white and soft by an admixture of saliva from the tongue.—Meanwhile the other bees are making ready their material in the same way. On the ceiling of the hive an inverted, solid arch of wax is built, and from this the first foundation cells are excavated, all the subsequent ones being built up and around these, which are usually 3 in number. The size and shape of the cell is determined by its future use; but all comb is formed of 2 sheets of cells placed back to back, the partition walls of the 2 sheets always alternating with one another. If the comb is intended for brood, 25 cells of worker-brood, and 16 of drone, go to the square inch."

Neighbour, in his work on "The Apiary," says:

"Wax is the animal fat of the bees, and to produce it requires a considerable consumption of honey to supply the drain upon the system. To be capable of passing through the pores of the abdomen, the wax must, no doubt, be a liquid, oily matter, which, on making its appearance outside the abdominal rings, thickens, and exudes from under the 4 medial ones, in flakes like fish-scales, one on each side; so that there are 8 of these secreting cavities, which are peculiar to the worker, not being found either in the queen or drone.

"The rapidity with which comb-building progresses would lead to the supposition that there is a division of labour among bees, just as laborers convey building material to the artisans on the scaffold above. This work of comb-building is carried forward in warm weather, for a cold temperature interferes with the secretion of wax. Von Berlepsch declares that he has known cases in which a colony has built 300 square inches of comb in a single night!"

The Rev. L. L. Langstroth remarks as follows:

"It is an interesting fact, which seems hitherto to have escaped notice, that honey-gathering and comb-building go on simultaneously; so that when one stops, the other ceases also. As soon as the honey-harvest begins to fail, so that consumption is in advance of production, the bees cease to build new comb, even although large portions of their hive are unfilled. When honey no longer abounds in the fields, it is wisely ordered that they should not consume, in comb-building, the treasures which may be needed for winter use. What safer rule could have been given them?"

With all our ingenuity and skill we have been entirely unable to equal the bees as builders. Only fancy what delicate work it takes to produce comb, the 180th part of an inch thick!! True, we take the wax they produce, melt it up, spread it into sheets, and then configurate it, showing the base or foundation of the cells—but there our inventive genius, for the present at least, "takes a rest." In comparison with their workmanship, ours is as a thick sheet of wrapping paper to a sheet of tissue paper!!

Friend Carlin, of Louisiana, last week, showed us a small specimen of drone-comb foundation, that was the thinnest we ever saw. It was produced by the new machine made by Novice for J. H. Nellis. So there is hope yet for us to come somewhat nearer in workmanship to the bees. That was vastly different to that used by Novice, last year, in his small sections, which we, as well as friend King, described as having "a regular fish-bone" in it.

A friend lately suggested that Novice answered us by stating that the Sections "contained only a narrow strip under the top bar," and that we had never noticed the remark. True; but it was a small matter, and we did not think it necessary. But now we will remark that these sections measure 3⅞ inches from top to bottom; a measurement just made, shows that the foundation, as put in them by Novice, is 1½ inches deep—that is but little less than one-half the way down to the bottom! Whether wide or narrow, that is the *exact* measurement—but perhaps he uses it narrower now. Our remarks were based upon it, as he then used it. As to thinning it, Novice admits on the same page (317, Dec. No.) that his pastor had found some that had not been thinned by the bees. It was therefore unnecessary for us to re-assert what he admitted.

The use of artificial comb foundation for surplus honey was denounced at the North-Eastern Convention, by Capt. Hetherington and G. M. Doolittle, for fear it would injure the sale of comb honey. This is a note of warning in just the right time. To *endanger* the market for comb honey would be very unwise—to really *injure* it, would be a crime. Hence the importance of this matter. If used at all, for surplus it must be exceedingly thin and perfectly transparent.

☞ Chas. Hastings, of Carlisle, Iowa, says he has a new plan for holding foundation. He says. "I call it the convex wedge slot; thus **V** 1-12 inch at surface, and ⅛ inch deep. This form holds it so much better than a saw kerf. A little resin put into the dipping wax will be beneficial. No patent."

Harmless Adulteration.

The *London Times* makes the following remarks on the above subject:

> "People will run after cheapness—they strive to get more than money's worth for their money, and the result is easy to fore-see. So long as there is a demand, there will be supply; and the excessive demand for cheap honey is now painfully felt in many directions. Many establishments are run on the plan of directly meeting this craving. They do it honestly and successfully, for the cheapening of goods is the development of manufactures and trade. Since the public pre-emptorily insist on a rate of prices incompatible with a fair profit and even the solvency of the dealer, the latter gives the public, he persuades himself, its money's worth with some harmless adulteration, sufficient to make the purchaser believe he is getting his goods cheap."

This is rather an ingenious way of putting it; particularly the *Times'* recognition of "harmless adulteration!" We fear our cotemporary hardly understands the question yet.

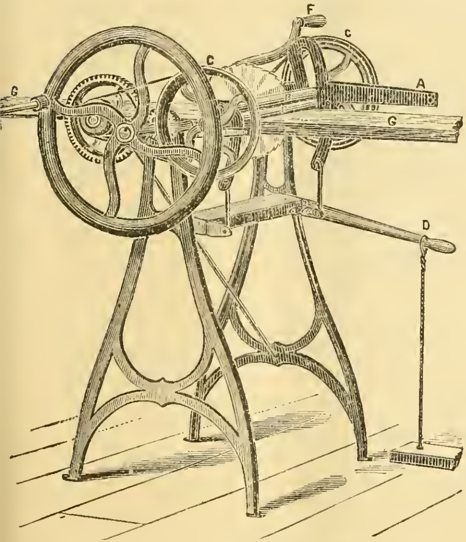
SOMETHING NEW.—We have received from M. Metcalf, Battle Creek Mich., a sample of his new comb-foundation for the brood chamber, made with standard linen, coated with wax for strengthing the comb. He has spent much time in experimenting with it, after having thoroughly tested wire, strips of metal, &c., &c. He has applied for a patent on his invention, and intends to secure to himself the benefits accruing from it. He has also been experimenting with linen, without a coating of wax, in the breeding appartment, and if he finds it a success, he will offer his invention to the public in due time. So look out for many vast improvments. Inventive genius is at work and wonders will never cease. Friend Metcalf is a practical and experienced Apiarist, and whenever he brings out anything, it is worthy a fair trial.

☞ "Bee-Keeping of to-day," by W. L. Reed, is added to our list of Books for Sale. All the manipulations of the Apiary are treated on, briefly, and in the absence of the larger works, it will be found valuable to beginners.

Hand Circular Rip Saw.

This machine, which is of untold value for making hives, and ripping out the stuff for honey boxes, is gotten up by W. F. & John Barnes, and is for sale at this office.—Its peculiar feature is that the saw, mandrel and balance wheel, slide together on planed ways, similar to a lathe. The saw is easily set to rip any width desired, and for those making their own hives, honey-boxes, &c., it is indispensable. It occupies but little space, and is made of cast steel and iron—only one piece being of wood.

The price is only $50, and no one who has used one would consent to do without it for many times that sum. We append a letter that will explain itself:



> Carlisle, Pa., Feb. 4, 1878.
>
> "Some time ago, we purchased one of Barnes' Hand Rip Saws. It has been in constant use for 6 months, and does all that it is recommended to do.—We rip door-tenons, rabbet shutters and blinds, bevel mouldings,—in fact, do everything that can be done on a machine run by steam. We carry on carpentering extensively—running from 7 to 15 hands.—This machine has been examined by thousands, and I think will be the means of introducing them into this section."
>
> S. Wetzel & Co.

The lumber is placed between two feed rollers, "B. B.," which feed it to the saw. The feed can be made slow or fast as the operator may desire, by the cone pulleys on feed rolls "C. C."

These rollers are self-adjusting to thick, thin, or uneven lumber. The saw can be instantly set to cut any width desired from a board or plank. The machine will feed to the saw, stuff from ⅛ inch to 3¾ inches in thickness, and ¼ inch to 19¾ inches wide. With it, one man can do the work of three using the old hand-saw. Unskilled operators can do the work rapidly and truly. Unlike the hand saw, the work is square and true as that done by steam or water-power saws, and as easily dressed with the plane. An operator with ordinary strength and endurance can easily rip, line measure, 600 feet of 1 inch pine per hour, or 6,000 feet in 10 hours.

By changing the feed to correspond with the thickness or hardness of the lumber, hickory, maple, ash, walnut and cherry can be sawed with ease. The speed cut (line measure) varying from 150 to 600 feet per hour. These are not rates given that a man can only follow for a few minutes, but actual days' work rates that can be followed up from day to day.

Honey as Food and Medicine.

This is the title of a new pamphlet to be issued about the middle of the present month, by the Editor of the American Bee Journal. Price 10 cents, postpaid.

We claim no credit for issuing this little pamphlet—though it is just what is needed now, to scatter information on the subject of honey—and increase its use.

At first, we were induced to promise to deliver a public Lecture, in Burlington, Iowa, on May 8th—under the auspices of the Western Illinois Bee-Keepers' Society. After agreeing to do this, we were informed that the Society had selected as the subject, "Honey; a healthful article of diet." And that very day came a letter from Wis, from friend Claussen, as published on page 129 of this Journal, asking us to write on the same subject. So that no credit belongs to us in the premises. We have simply produced it, because it was demanded.

After the introduction, we have given a brief history of Honey and its use among the ancients; the nature and properties of Honey; Honey as food; Honey as medicine; and have added a lot of Receipes for Honey Cakes, Honey Beverages, &c.

Any one having good Recipes for anything nice or desirable with honey ingredients will confer a favor by sending it to us *at once.* In return therefor, we will present them with a copy of the pamphlet as soon as out. We do not wish any Recipes that have been published in the American Bee Journal—we have all of them now. For prices by the quantity, for scattering, see page 129 of this Journal.

Marketing Honey.

This department will be devoted to items of interest concerning Packing, Selling and Shipping Honey and Beeswax.

☞ The honey in Prize Boxes and Crates, sent to the Paris Exhibition, by Messrs. Thurber, was selected exclusively from the product of friend P. H Elwood, of Starkville, N. Y. This is certainly a compliment to the producer, and we shall watch with interest the report of the Jury and publish its language *verbatim.*

☞ An important alteration has been made in Hoge's Carrier, substituting spiral springs for rubber balls. These carriers can now be made at home by any one, after obtaining a pattern, at a considerable reduction in cost. They are not intended to be used for car-load lots, but simply for distributing trade, in say half-a-dozen crate lots. They can be returned to the producer and used over and over, as often as necessary.

☞ Honey dealers, we presume, like all other merchants, have a varied demand to cater to, and as a consequence are obliged to sell honey in all shapes and conditions; sometimes some want honey without, as well as with, glass. We see no objection to their supplying any and all demands that may be made for honey, provided the want be for the genuine article.

☞ They say, "a wink is as good as a nod to a blind horse;" we hardly think that Capt. Hetherington did so much as wink at friend Betsinger about the working of wire into foundation combs. A wink must have been given, though, at the National Convention, and friend Betsinger must have *heard* it, for we see by last month's *Gleanings* that he has purchased a machine with copper rollers, for the express purpose of working in the wire! Well; so wags the world. Some originate—almost all imitate.

☞ Mr. Dadant asks the question in the March number of the JOURNAL: "What kind of honey was sold by an American firm, at Bremam, for the small price of 97 cents per gallon, or 8 cents per ℔?" We would say that strained honey from Cuba, San Domingo, Mexico, Lousiana and Florida, is offered freely at 87 to 90 cts. per gallon, and American dealers having foreign orders to fill, buy the honey from the 3 first countries "in bond" at 67 to 70 cts. per gallon. Lithgow Brothers, of Porta Plata, are in the habit of buying strained honey from the natives, at 30 to 35 cts. per gallon, to which must be added the duty levied by their government. Friend C. Parlange, of Pointe Coupee, La., has now some honey in New York, which he would sell for less than 8 cts. per ℔.

Freight on Honey.

Messrs. H. K. & F. B. Thurber & Co., of New York, are just now engaged in a vigorous and intelligent effort to secure a change in frieght classification of honey. They claim it is ridiculous to rate comb honey as first-class, as nearly all transportation companies do, and exact a release from the shipper, releiving companies from all loss of breakage or leakage occurring in transit.

Mr. F. B. Thurber is the president of the New York Board of Trade and Transportation, and therefore particularly well fitted to accomplish this important work.

There has generally been a discrimination made in classification, where releases were given. Take, for instance, the article of show-cases; they rate as first-class, but if released, they rate as fourth. For our own part, we have never been able to reconcile the justice of classing syrups as fourth, and strained honey in bbls. as second, or why transportation companies, who decline all responsibility of safe delivery should charge us more than fourth-class freight for our honey.

This change in the freight tariff would save honey producers many thousands of dollars in moving their crops next year; and we trust that every one who has the common interests of the bee-keepers at heart will co-operate in this matter.

☞ A letter from a honey dealer in Leith, Scotland, dated Feb. 22, 1878, is on our desk. It states that "comb honey is subjected to such severe handling in transit, that it is received in bad order, and is unsatisfactory to customers:" He also says that "people are very suspicious and prejudiced against American honey since the late adulterations." The remedy against such breakage seems to be in using a good Honey Carrier—such as that invented by Mr. Hoge. Is it not?

Sundry Questions.

San Diego, Cal., Jan. 15, 1878.

"This winter has, so far, brought an abundance of rain, and our prospects are good for crops of all kinds. Probably one-half our bees have died, out of about 25,000 colonies in this county, a year ago. So that I do not think our production the coming year will equal that of 1876, when we exported over one and a quarter million pounds.

1. What is about the average price. good comb honey has paid producers the past season, and what for extracted honey?

2. What has been the freight and charges, all told, from San Francisco to New York?

3. About what per cent. of breakage has occurred?

4. What is the freight, &c., on extracted honey, in casks, *via* Panama, from San Francisco to New York; and has any breakage or loss occurred?

5. What is the best size of package (cask) to ship in?" CHAS. J. FOX.

1. The average price of comb-honey this season ranged from 15 to 22c. for similar quality to California honey—the style of the package, to a large extent determing the price; extracted 7 to 13c.; the lighter grades, such as Clover and Basswood, bringing the highest prices.

2. Freights are for comb-honey $2.50 per 100 lbs; extracted, $2.00.

3. With comb-honey, when packed properly and well secured in cars, the loss from breakage is trifling.

4. In former years, contracts have been made to transport honey from San Francisco to New York, via Panama, at 1 to 1½c. per lb. for extracted honey.

5. In the East a wooden-bound white-wood barrel is generally used for syrups and molasses, holding 10 to 20 gallons, which when rinsed with melted paraffine wax, makes an excellent package, and perhaps the effort now being made will get extracted honey through at 4th class rates.

Honey in single boxes will sell better than any other, and if shipped in crates as used by friends Doolittle and Betsinger, 12 boxes in a crate, either boxes or crates glassed, will doubtless find ready sale. Such will do away with the glass jars, and close the door on adulteration generally.

The cry is for honey in neat, cheap, and convenient shape. Friends Hetherington & Elwood were the first to adopt progressive ideas about marketing honey, and their brand of honey is now sought for and made the standard of excellence. This season their crops averaged about 21 cents, gross weight—or nearly 36 cents, net weight.

For the American Bee Journal.

Marketing Extracted Honey.

Attention is turning to the best means of marketing comb honey, all over the country. It is but a short time ago that honey could be sold in any style of package, at very good prices—now the tendency is towards small packages. The smaller and more attractive the package, the more ready the sale.

This should give the producers of extracted honey the "cue" to the situation.—Heretofore, extracted honey has been put upon the market in glass jars and cans; in the former, while it shows to the best advantage, it soon candies, and becomes unattractive—and consumers pass it by for comb honey.

We have run our apiary thus far for extracted honey, but much of it candies on our hands every year, which it is necessary to liquify before it can be sold. It has been our aim to *try* to educate people that in that shape was the very best way to purchase it; and failing to have many adopt our views, I have concluded to go to the root of the matter, and try to educate the rising generation, so that when they come to maturity they will know the qualities of honey just as we now know the qualities of butter and cheese.

To do this, it has been my idea to put pure candied honey on the market in small, cheap packages. Now, we have near us, machinery for turning out small round boxes from white birch wood, and of various sizes, to hold from a thimble-full up to a pound. For an experiment, we have tried a size that holds 2 ounces. Coat the inside with parraffine, fill with candied honey, put on a pretty label, with a few facts about honey, and put on a ribbon for a bail, and dozens of them are readily disposed of at any country store for 5 cts. each.

They take their places beside oranges and lemons. We don't know how long they will have a run, nor how many months in the year. If the demand was sufficient, it could be kept for sale the year round, by keeping in a cool place during the hot months. And, why wouldn't ice cold, candied honey go with ice cream, or other ice cold dishes, drinks and relishes in warm weather?

These wooden boxes are pretty, and can be sold cheap. Our 2 ounce boxes cost $1.30 per gross. Labeling, packing and commission to dealer will be 2½ cts., leaving 2½ cents for your 2 ounces of honey, which equals 24 cts. per lb.

Should there be a call for it, boxes for 10 cts. up to 25 and 30 cts. could be furnished at proportionately cheap rates. Candied honey looks much more *at home* in such a box, and can be eaten out of it more readily than from glass. J. H. MARTIN.

Hartford, N. Y.

☞ We keep Prize Boxes and Crates in stock at this office, and can supply orders, without delay, lower than the lumber for a small quantity can be bought for, in the country. See prices on last page of cover.

Foreign Notes,

GLEANED BY FRANK BENTON.

Translated for the American Bee Journal.

Character of Baron Berlepsch.

WRITTEN BY RUDOFF MAYERHŒFFER, EDITOR OF "DER BIENENVATER," PRAGUE, BOHEMIA.

Baron Berlepsch, whose decease we mentioned in a previous number, was, next to Dzierzon, the greatest bee-master of Germany. Regarding Dzierzon as the discoverer, Berlepsch is the real founder of the movable-comb system. At first, skeptical—holding himself aloof from the views and discovery of Dzierzon, he was soon—after having become acquainted with their correctness—their warmest and most eloquent defender.

Berlepsch possessed a combative nature, such as we see in Luther, Ketteler, and Johannes Scherr. With him, the statement: "To be a man, is to be a battler," became really truth. He fought sharply against any one's disposition to boast, against assuming ignorance, low dealings and swindling. It was he, especially, who brought about the revolution in German bee-culture and gave it the impulse which produced such splendid results.

It is easily seen that many became hsi enemies, particularly those who felt themselves attacked. His utterance: "*Keulenschlæge austheilen*," was misinterpreted, and employed in placing him in an odious light. His style is a pithy, strong German; Berlepsch never descended to anything of a sickly, sentimental order; he always had too much esteem for his reader to torment him with miserable rhymes or idle words.

Berlepsch's apistic and general knowledge was colossal; he was an admirable master of the ancient languages, Latin, Greek, and even Hebrew. What a pity he lacked the knowledge of modern languages! His views were thereby confined, for he was deprived of the apiarian knowledge of other cultivated people; he valued too highly that of the Germans; and so, unwittingly, he helped to increase the German bee-keepers' self esteem, for which, however, he received few thanks.

Berlepsch's efforts were directed towards bringing bee-culture back to the important influence it once occupied in our fatherland and which, for example, it now possesses in the Union; to prevent its decline, by removing the damaging and often swindling operations that were connected with it.

As a means to this end, he pointed out that bee-culture must be followed by the economist, supplied with intelligence and capital, and must receive universal attention at institutions of learning. How far this has become a reality, every one who has ears and eyes can himself answer. Yet, we will not stop and rest; if we complete this work left as it were to us, perhaps it will be possible for us.

He always looked from a material standpoint, and yet—does it sound like irony?—he never obtained pecuniary benefit from bee-culture; for him it was only a pleasant occupation, serving to increase his knowledge and enabling him to be useful to those about him. In this, Berlepsch showed himself to be a true nobleman.

Berlepsch's private life could by no means be termed a pleasant one; it was and remained a struggle. He experienced the truth of "the old and yet ever new story;" and in science he sought comfort, which, indeed he found, even though only partially.

At one time, his health appeared to be nearly indistructable; yet, in July, 1868, he was deprived of this blessing. A sudden attack of apoplexy, which in a great measure crippled him, confined him from that time on, with few interruptions, to the sick-bed. So far as practical bee-culture is concerned, he was dead; but he still lived.—Willingly and with pleasure he gave answers to questions addressed to him, and also took an active part in all questions of great interest. It was a fortunate thing for him that his amiable and talented wife proved a self-sacrificing and affectionate companion. It was only thus that he was enabled to bear his afflictions.

He appeared and spoke for the last time at the convention of German and Austrian bee-culturists, in Salzburg; in 1872, celebrating at the same time the fiftieth year of his connection with bee-culture. From that time on, he avoided more and more all publicity; his suffering increased from day to day, until finally, on the 16th of September, last year, Death, as a welcome guest, released him.

If we glance over the work of Berlepsch, we must admit that it constitutes a marked epoch—not only for the bee-culture of Germany, but also for the whole bee-keeping world. Berlepsch will ever be held in remembrance, for he has reared for himself a monument that outlasts marble and iron. As long as bees exist and man cultivates them, so long will the name of Berlepsch be heard. FRANK BENTON, *Translator.*

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Discussion upon Hives in Germany.

At the last convention of German and Austrian bee-culturists, the subject of hives was discussed.

Dr. Dzierzon declared himself to be in favor of hives constructed to contain 2 colonies; the inner walls made of wood, the outer of straw; of medium height; the frames to be taken out at the front or rear side; and so arranged as to permit the increase or decrease in size of the brood apartment by means of division boards.

Herr Lehzen, Hanover, did not agree with Dr. Dzierzon, but claimed that for the north of Germany, straw was best for hives. He claimed that where the bee-keeper practiced moving his bees about, any other form than the old-fashioned straw hives would consume much time in handling, besides costing more, and not being as durable.—He stated that with the heath bee-keeper, turning up the hives to work with them does not interfere with the labor of the bees, since this bee-keeper works with his bees from 3 to 6 o'clock in the morning, and from 7 until 9 o'clock in the evening; and the speaker advised no one to handle stocks at any other time.

Herr Rabbow, of Howendorf, referred to the cheapness of the hive as a very important element, claiming that bee-culture will be followed extensively only when hives become very cheap. He considered top-opening hives far more preferable.

Dr. Dzierzon stated that with movable-comb hives, one could operate without hinderance to the bees, and particularly recommended, as the best time to handle bees, that portion of the day when they are flying most briskly.

Herr Frey, of Nuernberg, stated that the high price of movable-comb hives is what prevents their general adoption. He then described a hive whose walls were of wood, surrounded for winter with a packing of straw, or moss.

Herr Mayerhœffer, editor of *Der Bienenvater*, reports the discussion and then makes the following remarks:

"One thing was forgotten. The form of the hive must facilitate the greatest possible production of honey; and this is the case only with hives where the room for surplus honey is given in the direction that the bees are naturally inclined to store it, *i. e.*, above the brood chamber. This is particularly the case in the production of comb honey, for warmth is necessary, and that is secured only when it ascends from the brood chamber into the surplus honey department. Opening hives at the top is always preferable to side-opening. Among all forms, the two American hives, the King hive and the Langstroth hive, appear to me to nearly meet the requirements mentioned. Both of them are storing-hives, top-opening, and with removable honey-chambers. The American bee-keepers long ago attained cheapness in the manufacture of hives; a complete Langstroth hive, with 10 frames, is furnished, ready to nail together, at about a half dollar, or 1 florin, Austrian money."

There were about 300 members present at the 22nd "*Wanderversammlung deutscher und vesterreichischer Bienenwirthe*," held in Linz. Of course they had a glorious time. Count Visconti di Saliceto, editor of *L'Apicoltore*, of Milan, had 200 Italian queen bees, and 30 swarms on exhibition.

Der Bienenvater aus Bœhmen, (Prague), for Nov. and Dec., contains the translation of a long article on "Wintering Bees," by Chas. Dadant; and the Oct. number reproduces one on the same subject, by another American bee-keeper.

In Austria there is a law requiring sugar-refiners to close the doors and windows of their manufactories and store-houses, by means of wire-clote, in order to prevent bees from entering and perishing there. Here, the refiners employ the wire-cloth to retain the bees, when the latter have entered the manufactories, and to facilitate their destruction.—*L'Apiculteur, Paris.*

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

Chattanooga, Tenn., Jan. 28, 1878.

"My bees are in splendid condition. Hives are all full of stores. Nearly all have commenced brood-rearing. One colony has its second set of brood, capped. Maples are in bloom here, and it seems right curious to hear the hum of the bees, in the trees at this season, (midwinter). I am 'fussing' with my bees nearly every day. After studying over it, I am convinced that it is much the best to have the cap, or upper story supported by a strip, say 1 inch from the top, all around, outside the wire. It will keep the moth out of the cap, and that is a big item.—If the cap is supported by a strip, nailed inside the cap; unless it is all around, it will let the millers into it, and then they will fill it with eggs, to the distruction of many pieces of unprotected comb. With the present prospect, I shall be able to double my number of colonies by the time clover blooms, and get a good yield from that source. Am delighted with the prospect." S. C. DODGE.

Cave Spring, Ga., Feb. 9, 1878.

"I want to put my honey up in such a shape that I can sell it. Very few people use honey in Georgia, but I think it is owing to the shape it is in.—It is a very common thing, about the middle of May, to see men with water buckets, with a cloth tied over them, walking our streets with honey to sell. It is taken from the old log or box hive; new comb, old comb, young bees and honey, all well mixed, and fermenting! I think this is the reason why our people do not use more honey.

J. S. DAVIS.

[That is just what has killed the sale of honey in hundreds of places—the slovenly way in which it has been offered for sale. But when put up in a tempting manner, the old demand, much increased, however, will, no doubt, be found for good honey, in marketable shape,—ED.]

Small vs. Large Hives.

There is no point in bee-culture more vital, yet no one on which there is so much diversity of opinion and practice. The use of the movable frame is supported by the opinion and practice of all progressive bee-keepers. Yet, as to the size and shape of the frame, and consequently of the hive, there is the greatest want of harmony.

The Editor of the JOURNAL, (vol. XIII, p. 123), says: "Opinions differ as to hives. Any hive that you are accustomed to and can manipulate, will do. More depends on proper care than any particular style of hive." And this opinion is shared by many.

In order to approximate the truth on this subject, we must, forgetting all names and authorities, go back to the nature and habits of the bee, and pursue the inductive method. A hollow tree is Nature's hive, and conforms to the habit which Nature has impressed, for bees always form a round cluster, in order to preserve heat and vitality; and the receptacle which surrounds them should aid, and not tend to thwart them in their efforts. The heat which is formed by the cluster should be arrested by a wall, the same distance from all parts of the cluster; otherwise, the warmth cannot be equalized, and is being constantly dissipated by the colder air in the farther parts of the receptacle.

In making artificial hives, the nearest we can conform to the exact demand is to make the hive perfectly *square* and sufficiently *small*, to closely enclose the cluster in the ordinary winter condition and average numbers. Where there is, in the harvest season, a plethora of bees and stores, we must provide upper receptacles and deplete with the extractor, &c.

It is the nature of the bee to work with more energy in a hive that somewhat confines them—for they enjoy the prospect, as well as do men, of having only a reasonable task before them, and of being well able to accomplish it. It is very certain that in such a home they are better able to protect themselves against their various enemies.

As a conclusion then, we suggest that laterally a bee-hive should be perfectly square. If it is asserted that Mr. Langstroth favored a hive long from front to rear, it may be replied, that Mr. Langstroth's practice varied at different times. His hive, at first, wss 14⅛ inches from front to rear; 18⅛ inches from side to side, and 9 inches deep. After Mr. Quinby called his attention to some box hives he had purchased, that were made to lay on one side, and that bees wintered in them well, Mr. Langstroth then apopted a hive 24 inches from front to rear, 12 inches from side to side, and 10 inches deep. He next adopted a hive 18⅛ inches from front to rear, 14⅛ inches from side to side and 10 inches deep. See his book, 3rd edition, p. 330 and notes.

His object seemed to have been to adopt a hive suitable for a *shallow* frame, and large enough in single story for a full colony and its winter stores.

But to contract the Langstroth hive, so as to make it square or the same length from front to rear, as from side to side, would necessitate the constant use of a second story, except for nuclei or very small stocks.

This, again, would conform to nature, for ventilation is absolutely necessary to the bee-hive, in order to carry off damp, noxious, and heated air, both in winter and summer. What better ventilation can be given than to allow the heated and corrupt air, which is lighter than pure air, to ascend and pass off from the bees and brood, through the upper store combs. In hot weather the heat ascends readily from the vital breeding part of the hive; and in cold weather, the bees, as they retreat from the entrance, get further up among the life-giving stores.

For the South, in order to be successful in bee-culture, it is necessary for us to have a two-story, tall hive. The Langstroth with the upper story in constant use is too large for an average stock.

If the above premises are correct, the best hive generally, and especially for the hot climate we have, is the two-story, laterally square hive, of moderate dimensions, say with a shortened Langstroth or the Gallup frame. OSCAR F. BEDSOE.

Grenada, Miss., March 7, 1878.

Dividing Stocks

The following is a good method for dividing bees, and one that is both practical and easily performed by the experienced:

After providing an extra hive with empty frames; or better, frames filled with comb, proceed to open the hive to be divided, and after subduing the bees wlth smoke or otherwise, lift out the brood combs with all adhering bees, until ⅔ of all the brood is removed, placing the same in the new hive and being careful not to remove the queen.

Fill all unoccupied space in both hives with comb frames. Locate the new hive some distance from the old. All the old bees will return to the parent hive, but enough young bees will remain to care for the brood.

A fertile queen may be given the new colony after 48 hours, or about sunset on the second day, by quietly setting her on one of the brood combs. The bees, being all young, will accept her and the work is done.

We introduced many queens to new colonies, last season, as here given, without the loss of a single queen. The new colony will not work much for a time, but is generally equal if not superior to the parent stock, in a few days. S. D. MCLEAN.

Culleoka, Tenn., March 9, 1878.

Chattanooga, Tenn., March 20th, 1878.

"I am of opinion that the reason why some comb-honey that is made on foundation starters, contains a tough center called "fish-bone," is caused by the wax having been subjected to such *high pressure* when rolled in the machine, as to render it *tough* and *horn-like*. If the rollers of the machine are adjustable, they should be slacked enough to make a good impression for the bottom of the cells, but not allowed to raise a septum between them. For starters, I should prefer *soft-rolled* foundation, but for the brood-combs, I would prefer thick *hard-rolled* foundation." S. C. DODGE.

Conventions.

San Diego Convention.

The San Diego, California, Bee-keepers' Association met in San Diego, Feb. 7, with a good attendance. President Fox in the chair, R. G. Balcom, Sec'y.

The minutes of last meeting were read and approved.

The committee appointed to apply for a reduction of tax on bee property, reported a reduction of 20 per cent.

The next thing in order was the reading of the

PRESIDENT'S ANNUAL ADDRESS.

GENTLEMEN:—The past year has been the most disastrous to the honey producing interest ever known in this section of the country. In 1876, we produced and exported in San Diego county over one and a quarter million pounds of honey, while in 1877, we did not export any, but imported considerable honey and sugar to feed our bees, in spite of which, the number of colonies has probably been reduced from 25,000 to less than 15,000.

Several causes have combined to bring about this result:

First.—The past winter, 1876-7, was one of the driest on record, and the small amount of rain that fell was all after the 20th of January, and was of little benefit to many of our honey producing plants, cutting off our early spring feed.

Second.—The spring was unusally cold, with frosts and drying winds, so that many of the flowers were blighted or did not contain any honey, injuring our late spring feed.

Third.—The phenominal hot spell of June, consisting of 5 consecutive days of such intense heat as has seldom occurred here, the thermometer ranging from 100° to 105°, and the relative humidity as low as 5 to 7 per cent. completed the mischeif, and our most reliable summer feed was ruined. After this, only a few summer and fall flowers remained, and comparatively few colonies gathered enough for their own consumption.

This unfortunate combination of events is not likely to occur again for many years; and we may feel reasonably sure, for some time to come, that our country will retain its old reputation as the best honey-producing place in the United States.

The outlook for the coming season is unusually favorable. We have had abundant rains, coming frequently in soft, light showers; the ground is in splendid condition; the grain, of which an unusually large breadth has been sown, is looking finely; grass is very good, and the honey-producing plants are in very thrifty and fine condition.

As we shall probably have a good honey season, we must look ahead and make plans and calculations as to the best way of securing and marketing our crop, for it is only very foolish persons who go on from year to year, doing the same under all changes of circumstances.

Three years ago, when many of our apiaries were first established, honey sold readily at high prices, and we did not think we could overstock the market with an article so fine as our honey was acknowledged to be.

But times have changed; there has been a great increase in production in the eastern states, and the quality has been much improved; hard times and general economy have reduced prices, till we can, with difficulty, sell our comb honey at one-half of former prices.

Fashion has also changed. Eastern apiarists now generally put comb honey on the market in small packages, protected with glass, so that they secure a more ready sale and higher prices than we can. Another great drawback against us is exhorbitant trans-continental railroad charges.

With these difficulties to contend with, we cannot place our best comb honey on the eastern markets, in competition with the local supplies, and realize enough to make producing a paying business.

To remodel all our hives and section boxes; to pay a high price here for glass and the freight on it east, and in other respects conform to the eastern fashions, would cost us more than we could afford, especially during the coming season.

As an evidence of the disadvantage we labor under, in not conforming to the new style of putting up comb in small packages, I quote from the report of the Michigan Convention, in the AMERICAN BEE JOURNAL for January, 1878:

> Mr. Fahenstock, of Toledo, said: "I sold beautiful honey in wood sections for 13c., in glass boxes it sold readily at 20c. per pound.
>
> Mr. T. G. Newman, of Chicago, said: "The larger boxes of yore with many combs are rapidly going out of demand, and now it is difficult to dispose of those having more than 2 or 3 combs at any price.—The objection to the Harbison sections are:
>
> 1. Though readily divided by grocerymen, it puzzles them to devise means to pack such combs without side protection with other goods, and deliver to their customers without seriously damaging them.
> 2. For the retail stores, not being protected from dust and dirt, honey in these frames soon becomes unattractive to customers.
>
> "Dr. Whiting, of Saginaw, said he had put up his honey in cases, but sold for 17c.; when he saw honey no better than his, put up in a different case, sold for 25c., he couldn't stand it."

And a private letter to Mr. E. W. Morse, our vice president, from Mr. Rufus Morgan, of North Carolina, says of comb honey:

> "Comb honey gets to the retail trade so badly broken up that but few care to deal in it, and it costs so much expense in handling, one break down will disgust a dealer forever."

In the report I submitted to the last annual meeting of this Association, I took strong ground in favor of our apiarists going into the production of extracted or strained honey, instead of comb, and I am still more convinced of the advantage of this change. My reasons then against comb honey were:

1. The greater freight charges, because we were compelled to send by rail instead of water, and pay high freight on a large percentage of dead weight.
2. The greater cost of putting up.
3. The difficulty of shipping, except in car-loads, and the large amount of breakage.
4. The great difficulty of distributing in

small lots to retail dealers, and from them to consumers.

I have prepared some figures, showing the relative cost of shipment from San Diego to New York, by rail, from San Francisco, of comb honey in cases weighing 75 ℔s. gross, or 56 ℔s. net; and extracted or strained honey in casks, weighing 300 ℔s. gross, or 280 ℔s. net, by water round Cape Horn.

At these weights, 1 cask will equal 5 cases, and the calculations are as follows:

One cask costs here	$ 2 00
Freight from San Diego to New York, by water, 300 lbs. @ 1½ cts.	4 50
Total cost, packing and freight,	$ 6 50
Cost per pound of net honey, 2 32-100 cents.	
Five cases, with nails and paper, 26 cts. each	$ 1 30
Twenty section boxes with nails, at 11c. each	2 20
Freight on 350 lbs., gross weight, at 3c.	10 50
Total cost of packages and freight,	$14 00

Cost per pound of net honey, 5 cts. Difference in cost and freight per pound, 2 68-100 cts. Besides this, is the labor of making section boxes and packing cases, packing the honey, and the freight on 50 ℔s., extra dead weight, from San Diego to and from the apiary.

The prices of honey, quoted in the AMERICAN BEE JOURNAL, for January, 1878, in New York, Cincinnati and Chicago, averaged 15c. for comb and 10c. for extracted.—We cannot expect to realize here, next summer, more than 8c. for comb and 5c. for extracted; the difference in cost of preparing the two kinds will be a large part of the difference in these prices.

This whole argument, so far, is based on bees making as many pounds of comb as of extracted honey, but the experience of all who have used the extractor proves that the yield is very largely increased by it. If it is only increased 50 per cent. it would, no doubt, pay better than producing comb honey.

But there is another side to the question that has not been much discussed: The advantage of making strained honey and wax for sale.

On this subject I have the opinion of Mr. Rufus Morgan, in the letter quoted from above. He says:

"Now, in your section (and I am open to evidence to the contrary) the opinion I have always held is, that the true profit of the apiary is from *wax*, the honey to pay expenses.

"I could manage four times as many hives run for wax as for comb honey, and seven or eight times as many as run with the extractor."

"Now let us see how we can make out the case. Suppose the busy season for the production of surplus honey to last fifty days. My observation in this country is that with Harbison hives, fitted with main frames in the top, instead of section boxes. Two, good, experienced men can extract, by hard work, about 2 casks, of 280 ℔s. net, each, per day. This would be, say, the yield of 4 good average hives, allowing them to produce 50 per cent. more than they would of comb honey. In the season of 50 days, by steady work, the 2 men could attend to 200 hives, or an average of 100 hives to each man. Now, to carry out Mr. Morgan's estimate, the 2 men could take out comb honey from 400 hives, and this is our experience also. From how many they could simply cut out the honey, put it into a strainer, barrel the honey and lay aside the wax to be tried out in a more leisure season, I cannot say; but do not think his estimate of 800 hives an extravagant one, as it would only require 16 hives per day to each man. Now, comb honey will yield from 8 to 10 per cent. of wax, which is worth 25 cents per ℔. here, or if bleached, a very simple process, nearly double that price. The bleaching consists in simply exposing the yellow wax to the sun in a long tin trough, slightly inclined so that it will melt and run down slowly, and it is worth, I understand, 48 cents per pound in New York.

In the present condition of the honey business, the low prices we can realize here, and the high price of labor, we must run our apiaries as cheaply as possible. If a man has only 100 hives, he can realize more honey, and make more money by extracting than by straining, or, in my opinion, than he can make by producing comb honey. If, however, he has 400 hives, I believe he can make more money by simply straining and selling the honey and wax than in any other way, because he can do all the work himself, without hiring any help.

It is well known that the cheaper an article is sold, the greater the demand. In a letter from a firm in Liverpool, they told me that if we could put our strained honey on the market at 8 cents per ℔., the demand would be unlimited. It costs about 2 cents per ℔. from here to Liverpool, including all expenses. If, during the coming fall, ships should be loaded from here to Liverpool with wheat, for our grain crop promises to be large enough to justify this, we could send honey much cheaper, which would leave us a fair price. Good, strained honey is worth now, from 10 to 12 cts. per ℔. in Liverpool.

From all the above facts and arguments I draw the conclusion that our future prosperity as honey producers depends on our making only as much comb honey as will supply the Pacific coast, and by economizing in labor, materials and freights, ship direct to New York and Europe a fine, pure article of strained honey, which will sell low enough to create a large demand, and at the same time afford us a good price for production. The former prejudice against *candied* honey has given way, as I foretold a year ago it would, in view of the fact that only perfectly *pure* honey will candy. Our sumac honey, which all experienced persons prefer to any other, and which forms a large proportion of our production, candies soon after being barreled, and will, I think, become the favorite in the market. I am corresponding with parties in the east and in Europe, and will give the information to the Association soon.

Since writing the above, I have received a long and very interesting letter from Thurber & Co., of New York, in regard to the style of putting up comb honey for the eastern market. We may be able, before the commencement of the coming season, to obtain such information and make such arrangements as to enable our apiarists to conform to the present demand, and in this way get as good a price for our comb honey in New York and other markets as eastern producers, though we cannot avoid the exorbitant freights that make so heavy a discount on our profits as producers here.

C. J. Fox.

The reports of the secretary and treasurer were then read and accepted.

The corresponding secretary read letters from Mr. R. W. Waterman, of San Bernardino, to the effect that a Bee-Keepers' Association had been formed in that county, of which he had been elected secretary, and asking the co-operation of the Association to procure from the Legislature an act to prevent the spread of and extirpate the disease known as "foul brood" among bees, which now prevails to some extent in San Bernardino county, and is very contagious and destructive. Also an act to prohibit the manufacture and sale of adulterated honey, and other desirable legislation.

The meeting requested the president to correspond with Mr. Waterman and the Hon. Mr. Pauly on these subjects, and endeavor to secure the co-operation of other counties in Southern California.

A letter was also read from M. J. S. Harbison, asking the Association to assist him in procuring for the ensuing year a just valuation as a basis for taxation on bee property. E. W. Morse was appointed a committee to confer with Mr. Harbison on the subject, and lay it before the Board of Supervisors.

A letter was read by the president, from H. K. Thurber & Co., of New York, containing valuable suggestions in regard to the present mode of putting up strained honey, in the Eastern States, and the president was directed to obtain further information on the subject, with a view to recommending a change in our method of putting up comb honey.

A letter was also read from Rufus Morgan, of North Carolina, to E. W. Morse, giving some information on the subject of making strained honey and preparing wax.

The following were elected directors for the ensuing year:

E. W. Morse, R. G. Balcom, Chas. J. Fox, J. McG. Frazier, A. P. Herrick, W. W. Terry, J. P. Jones, L. L. Lynch, E. C. Emery.

The newly elected directors organized by electing the former officers: Chas. J. Fox, president; E. W. Morse, vice-president; R. G. Balcom, secretary and treasurer, and appointed these officers an executive committee to manage the business of the Association, and then adjourned.

North-Eastern Convention.

(*Concluded.*)

THURSDAY, FEB. 7, 1878.

L. C. Root read a paper on "Parasites of the Honey Bee." He thinks those parasites have been the cause of a great deal of the mortality in winter, and yet, they have destroyed to a great extent, the malady known as foul brood, which has been the greatest scourge.

Mr. Van Deusen suggested that those who lose bees in winter, examine them to see whether they are covered with parasites.

Mr. Curtis invited the convention to meet in Utica, next year. Balloting resulted as follows: Syracuse, 21; Utica, 15; Albany, 4. Syracuse was declared chosen.

"*Are the Italian bees superior to the blacks?*

Mr. Doolittle says the two races are like some men. One will not work unless he can secure dollars, while another is satisfied to glean pennies. The Italians will gather in times of comparative dearth, while the blacks seem discouraged and are idle.

Mr. Van Deusen prefers the black bees to Italians, in buckwheat harvest, although hybrids are equally useful. Mr. Elwood agrees that hybrids are most useful in his locality. He prefers a race containing about three-fourths Italian blood—one-fourth black.

Mr. Root says neither race possesses as many points of superiority over the other as some claim for them. He would advise every one to have both races. He found that the Italians are active workers, but when abused they are also active fighters.—In 1876, Dr. A. H. Marks had secured 150 pounds from his only Italian stock, while his best black stocks only gave about 75 ℔s. each.

Mr. Doolittle—the purer the Italian, the more industrious the bees, and the more the profits from them.

W. A. House prefers a cross of ⅞ Italian blood to ⅛ black.

Dr. Marks found that one fall an Italian stock filled a set of side and top boxes from wild flowers, while his blacks failed to secure any surplus.

Mr. Perry considers the black bees superior to Italians in every particular. He says the champions of Italians are constantly growing less in number and weaker.—He would sell any stock that seems mixed.

Dr. Marks had never secured more than 75 ℔s. of comb honey from one black stock, while he had taken 225 ℔s. from an Italian.

Mr. Preston wished to know if any one had secured over 100 ℔s. of box honey from a black stock. Comparison will tell the story.

Mr. Lloyd had, in 1874, 22 stocks of black bees, which increased to 43, and took an average of 115 ℔s. of box honey. Basswood yielded bountifully for 3 weeks.

E. D. Clark must have some Italians, but considers the blacks equally as profitable.

H. Root had always kept black bees.—He considered blacks equally as good as Italians.

In 1877 he had 56, and increased to 110, taking 4,798 ℔s. of cap honey; shipped to New York. A single new swarm, cast June 15, gave 167 ℔s. of box honey. Both Mr. Root and Mr. Lloyd live in Otisco Valley, than which no better locality can be found.

Mr. Perry will give $100 for 1 ℔. of red clover honey, gathered in his locality, by any kind of bees. He has acres of red clover.

Mr. House says his Italians did work on red clover this last season, when no other plant was in blossom.

Dr. Marks agreed, and said that when he had only one stock of Italians, he found ten Italians to one black on the red clover. He had many black colonies then.

Mr. Snow had taken, in 1873, from a new Italian swarm, hived May 15, 124 ℔s. The parent stock gave 76 ℔s. of box honey.—In 1877, a swarm of Italians, hived May 12, gave 132 ℔s. of box honey. Mr. Snow lives at Fayetteville.

FRIDAY, FEB. 8.

President Root in the chair.

The question of marketing honey and the time of preparing the statistical table was considered.

Mr. Ellwood offered a resolution that a committee of five be appointed to revise the statistical table, to add to its completeness, and change the time of its publication. It is expected that this committee will bring great benefits to the members of this association.

The motion was carried.

The president was instructed to appoint such committee, which he did, as follows: P. H. Elwood, Starkville, N. H.; G. M. Doolittle, Borodino, N. Y.; E. D. Clark, Randallsville, N. Y., and J. E. Hetherington, Cherry Valley.

The secretary said that we had failed to secure the benefits that should result from our sessions, just because we had failed to prepare a programme and appoint speakers to open topics. Article 8th of the constitution provides for these conditions, and should be more fully carried out.

Mr. Nellis requested that every member of the association send to him, at any time during the year, any question of vital importance. He would file such questions, and the committee will have a fund from which to make out an interesting programme.

The following delegates were appointed to attend the coming convention of the National Society, to be held in New York city next October: Messrs. C. D. Jones, G. M. Doolittle. E. D. Clark, Geo. M. Batty and L. C. Root.

Mr. Warner, from the Committee of Arrangements, stated that the expenses of the City Hall were $6.50. This was ordered paid.

Mr. M. B. Warner was chosen a committee of arrangements for the coming year.

QUESTIONS ANSWERED.

The following questions were presented to the Committee on Questions, consisting of Messrs. E. D. Clark, of Randallsville; N. N. Betsinger, of Marcellus, and L. C. Root, of Mohawk, and answered as follows:

Question—What position should the honey occupy in the brood chamber, in the winter, in order to meet success?

Answer—One of the committee answered: Full combs in the center; the other committeemen favored the outside.

An animated discussion was provoked by this answer, in which several persons participated.

Q.—Can water be fed inside the hive, in spring, to advantage?

A.—Yes. by two of the committee, and no by the other.

Q.—Is teasel honey superior to white clover and basswood honey?

A.—Yes, by one of the committee. He considers the flavor superior to basswood and white clover honey.

Mr. Doolittle said it was not, only in looks. Teasel honey is the whitest honey known.

H. Root said that during the late war, when teasels were largely cultivated, his honey was dark, but since the decreased cultivation of teasels, his honey was whiter.

Q.—Will the queen of the second swarm get impregnated while swarming, or will she have to come out another time for that purpose?

A.—She sometimes does so, but as a rule, she comes out again for that purpose.

Q.—Do the bees, acting as nurses, alter in any respect the natures of the young queens or bees nursed?

A.—No.

Q.—Can virgin queens be successfully introduced? If so, how is it done?

A.—Yes; leave the colony queenless three or four days. Cut off all cells and put in a very young queen.

Q.—May not the trouble of lazy and unprofitable Italians come from breeding for color?

A.—Yes.

Q.—What is the best use to make of our buckwheat honey?

A.—Sell it.

Q.—Is basswood better than pine for honey boxes?

A.—No.

Q.—Can bees that are swarming in the air be controlled, so that they cannot abscond when the bee-keeper is near?

A.—Yes, by previously clipping the queen's wings, or using a fountain pump.

Q.—What is the cause of foul brood?

A.—Unknown.

Q.—What is the remedy for foul brood?

A.—By one of the committee—Twenty-one days after swarming, shake off all bees from the combs in parent stock, and destroy the combs. By two of the committee—Shake the bees into an empty hive or bag and destroy the combs at once, and 48 hours after give the bees a hive which you wish them to occupy permanently.

The association then adjourned.

J. H. Nellis, Secy.

[The tabular statement may be found on the next page.—Ed.]

North-Western Illinois Convention.

A few of the apiarists, of north-western Illinois, met at Rock City, Ill., Dec. 4, 1877, and organized the "North-Western Illinois Bee-Keepers' Association." After the adoption of a constitution, the Association adjourned, to meet at the call of the executive committee.

The Association met at Rock City, Ill., Jan. 29, 1878. President H. W. Lee in the chair; T. E. Turner, Sec'y.

After reading the minutes and constitution, 5 new names were added to the roll.—The Association entered into the discussion of topics as follows:

NORTH-EASTERN BEE-KEEPERS' ASSOCIATION.

TABULAR STATEMENT OF OPERATIONS FOR THE PAST SEASON.

NAMES.	SUCCESS IN WINTERING.									SUCCESS OF THE SEASON'S OPERATION.													
	No. of Colonies Fall 1876.	Condition in Fall.	No. of Colonies Spring 1877.	Condition in Spring.	Where Wintered and the Average Temperature	When put in—1876.	When taken out—1877.	No. of flights in winter.	Manner of wintering briefly expressed.	No. of Colonies Spring 1877.	No. of Colonies Fall 1877.	No. of Italians in Fall.	No. of Blacks in Fall.	No. of Hybrids in Fall.	Name of Hive.	Number and size of frames, outside measure.	Amount of Box Honey produced.	Am't of Extracted Honey produced.	Proportion of white honey.	Amount of wax.	Extra Italian Queens.	The principal sources from which honey was gathered.	Average value of the honey season.
H. Root	80	g	65	m	Out-doors	....	....	..	Different ways	65	110	...	110	...	Langstroth	10 fr 18x9¾	5,000	....	9-10	30	...	clo., bassw., bu.	m
G. M. Doolittle	104	m	80	m 1	Cellar & out-d, 42	Nov. 27	Mar. 17	2	Fig. 2	67	152	152	...	..	Doolittle's	9 fr 11¼x11¼	10,284	893	5-6	30	100	cl., ba., tea., bu.	g
J. L. Scofield	90	g	90	g	Cellar. 42	Nov. 27	Apl. 13	..	Quilts over frames	90	112	112	...	.50	Langstroth	10 fr 9⅛x17⅝	5,430	1,050	½	47	69	clover, buckw.	..
H. D. Mason	72	g	65	g	Out-doors	Nov. 15	June 1.	1	Packed in boxes	60	108	37	1	70	Langstroth	10 fr 9⅛x17½	4,800	200	9-10	20	...	basswood	g
N. N. Betsinger	200	m	40	w	Out-doors	....	....	1	Packed in saw-dust	74	178	20	18	140	Betsinger Imp.	8 fr 9½x15	7,500	100	5-7	100	...	teasel & buck.	g
W. A. House	280	m	137	w	160 in, 120 out	Nov. 15	Mar. 20	1	....	137	240	80	...	160	House's Imp.	8 fr 12¼x11½	5,000	500	⅔	30	...	wh. & red clo.	m
Joseph Stetsel	60	g	54	w	Cellar, 35 to 40	Dec. 2.	Apl. 3.	..	No protection	54	88	...	66	22	Old Quinby	8 fr 18½x11¼	1,250	....	2-5	6	...	clover & buck.	m
W. V. Bosworth, Jr	21	..	14	g	Out-doors	....	....	..	Packed with straw	14	32	mi	xe	d	Langstr'th Imp.	8 & 9 fr 16½x10	300	10	....	6	...	ba., cl., lo., w. fl.	g
Leroy Newton	10	g	10	g	Cellar	Dec. 30	Apl. 1.	..	Quilts over frames	10	26	...	26	...	Langstroth	10 fr 9⅛x18	550	....	all	...	...	clo. & basswood	g
A. H. Marks	72	m	47	w	House, 45	....	....	1	Packed in chaff	47	76	63	1	12	Quinby	7 & 8 fr 17x11½	3,700	400	⅔	...	20	clo., ba., bu., G.	m
Wm. R. Edwards	24	g	15	g	Out-doors	....	....	..	Packed in straw	15	28	...	28	...	Langstroth	10 fr 9x17¾	1,064	....	½	...	...	cl., ba., tea., bu.	g
W. E. Clark & Son	57	m	52	m	House, 38	Nov. 25	Apl. 2.	1	Fig. 3	52	108	1	107	...	Wheeler's Imp.	12 fr 10¾x11¼	1,000	1,500	¾	40	...	cl., ba., buckw.	g
E. F. Wright	62	g	46	m	Cellar and house.	Nov. 15	Apl. 6.	3	Top tight, end vent'n	46	78	15	56	7	8x12, 11 deep	8 fr 10½x17	3,000	150	⅔	25	8	cl., ba., ivy, G.	g
T. A. Sallsbury	4	..	14	g	Out-doors	....	....	..	In chaff boxes	14	24	...	1	23	Langstroth	10 fr 9⅛x17⅝	1,314	....	all	4	...	sw. & wh. clo.	g
Daniel Marsh	47	g	34	g	Cellar & out-d'rs.	1st c'ld	Apl. 25	2	Carpet on top—cellar	34	76	12	...	64	L. & Marsh	9 & 10 fr 12x13	2,500	....	¾	...	...	clo. & bassw.	m
Edwin A. Knapp	10	g	8	g	Cellar, 45 to 55	Dec. 21	Mar. 14	1	Carpet on frames	8	14	...	10	4	Langstroth	10 fr 9x18	860	....	¾	4	...	clo., bu., ba., ra.	m
Danl. Z. Betsinger	35	m	26	g	Out-doors	....	....	..	Passages in combs	26	46	...	46	...	Langstroth	7 fr 10¼x16⅜	900	120	⅞	8	...	basswood	m
Ira Wilson	45	g	22	w	Out-doors	....	....	..	Packed in straw	32	53	...	23	30	Quinby Impr'd.	6 fr 19½x11½	1,000	50	½	...	...	clo., ba., bu.	pr
Geo. W. Battey	121	g	100	g	Out-doors	....	....	3	Packed in straw	100	140	20	100	20	L. & box	8 fr 11x14	3,000	500	¾	...	...	clo., ba., bu.	g
S. T. Hoyt	75	g	42	g	Out-doors	....	....	4	....	42	76	33	...	38	Graves & box	8 frames	1,000	120	⅔	30	...	fruit, clo., ba.	g
J. E. Lloyd	64	..	44	w	Out-doors	....	....	..	....	44	73	...	70	3	Farmer's Fr'nd	9 & 13 fr 10½x11	3,394	....	⅞	75	...	clo., ba., bu., ra.	m
C. D. Jones	50	..	50	g	Cellar, 44	Nov. 22	....	2	Quilts over frames	50	50	mi	xe	d	Langstroth	9 frames..|15½	2,700	800	¾	30	...	clo. & bassw.	m
M. B. Warner	15	m	14	g	House & out-d'rs	....	....	..	....	14	22	3	3	16	Universal & bx.	8 14¼x11½,9¼x	620	773	9-10	9	...	wh. & sw. clo.	g
J. H. Bucklin	179	m	170	m	Cellar, 38	Nov. 20	Apl. 2.	..	....	170	205	mi	xe	d	Mostly box	8 fr 12x16	2,200	....	all	...	...	clo. & bassw.	m

EXPLANATIONS.—m, medium; g, good; w, weak; pr, poor; ba, basswood; cl, white clover; bu, buckwheat; tea, teasel; lo, locust; G, golden rods; ra, raspberry.

Fig. 1.—50 fair; 30 very weak. Fig. 2.—50 out-doors, packed with straw; those in cellar, quilt over frames; 67 honey stocks in spring 1877; those in cellar had no flights.

Fig. 3.—6 inch cut straw in cap, end frames removed and filled with cut straw.

L. C. ROOT, *President.*

J. H. NELLIS, *Secretary.*

ITALIANS VS. NATIVE BEES.

Mr. Williams' success with the black bees, working in boxes, was better than with the Italians. The Italians appeared to dwindle worse than the black bees in the spring; but the Italians were easier handled, and were not troubled so much with moths as the blacks. On the whole, he preferred the Italians.

H. W. Lee preferred the Italians. Their queens are more prolific, easily overcoming spring dwindling.

Mr. Willikin prefers Italians, because they work on red clover when the blacks would not.

T. E. Turner gave the preference to the Italians over the blacks. Had seen them in great abundance on the red clover, but had never seen a black bee on it. Italians seemed sometimes to prefer the red clover to the white. Italians would stay on the combs, when handling, while the blacks would run to the sides of the hive. It took much longer to find a black queen than it did to find an Italian. They are proof against moths.

Mr. Kiester thought Italians were much better than the native bees.

PREPARING BEES FOR WINTER.

Mr. Lee had fed sugar syrup in September, when bees failed to store enough honey for winter, and his bees wintered well on it. Fed late in the evening, by pouring the syrup right on the cluster in the hive. He preferred summer honey, rather than fall honey; bees wintered on it were less liable to disease. He would feed honey after this and not sugar, for those who did not understand the matter thought he fed sugar syrup to be extracted and sold for honey. He takes off the honey board and puts on old sacks or cloth, to keep bees warm and to absorb moisture. Had always wintered in the cellar.

Mr. Williams had kept bees in box hives until recently, and had wintered out of doors successfully. He now wintered his bees in the cellar, giving ventilation through wire cloth.

T. E. Turner wintered bees in the cellar, and this winter put on a piece of muslin in place of a honey board. He preferred ripe summer honey to fall honey or sugar syrup, for winter feeding.

COMB FOUNDATION.

J. Stewart considered comb foundation a great success. It enabled the bee-keeper to get all straight worker-combs.

R. M. Millikin had used it for starters, during two seasons, and liked it very much.

J. Fehr tried it, but was not very successful; expects to try it again next season.

T. E. Turner considered it a success, if used only for comb guides; and, if used more extensively, it would give all worker-comb, which could not be got where bees were allowed to build all the comb themselves.

NATURAL AND ARTIFICIAL SWARMING.

Mr. Lee liked both natural and artificial swarming, under some circumstances. He liked the artificial method when he had plenty of empty combs to fill the hives, and a fertile queen to introduce into the queenless part. But, if he had neither empty combs nor fertile queens, he liked natural swarming the best. Such swarms usually build straight combs, and were not so apt to cast second swarms. He thought cells from a hive that had cast a natural swarm produced more prolific queens than those produced by artificial swarming.

Mr. Keister also thought forced queens were not so prolific as those produced by natural swarming.

Mr. Williams liked artificial swarming, but lets his bees do their own swarming, mostly.

T. E. Turner never practiced natural swarming, because he had no bees to spare to go off to the woods. He did not like the artificial method of dividing, unless he had a fertile queen for each part; still, he preferred it to natural swarming. He had tried nucleus swarming and thought that the best method of increasing stocks.

FERTILE WORKERS.

Mr. Lee had got rid of a fertile worker by caging a fertile queen in the hive 10 or 12 days before releasing her. He thought the surest plan to get rid of fertile workers was to unite the bees with a hive near it that had a fertile queen, and then in a few days divide the united stock, if thought best.—He had not tried that plan, but could not see why it would not work satisfactorily.

Mr. Williams had a hive in which he had 4 Italian queens killed, and he introduced a black queen successfully.

T. E. Turner had but little experience with fertile workers. He had been told a good plan to get rid of one was, taking the bees 20 rods away and scattering them around on the ground, and then letting them fly back to their old stand. But he thought uniting bees with some other colony, and afterwards dividing again, would be the most economical plan.

ROBBING AND ITS CURE.

Mr. Lee keeps the entrance contracted and honey out of the way of bees, to prevent robbing. When robbing was general, all over the apiary, he had stopped it by closing and opening the entrances of all the hives alternately, for a few times in quick succession. The bees became confused and the robbing stopped. If but one hive was robbing another, he had stopped it by exchanging places of the two hives.

T. E. Turner found robbing was like many other things—more easily prevented than cured. He had been told, a good way to stop robbing was to put loose straw over the entrance of the hive that was being robbed.

MARKETING HONEY.

Mr. Williams has his honey stored in old-fashioned boxes, and puts his extracted honey in Mason jars, and sells it all at the same price.

Mr. Lee finds that some customers want honey in frames, and others want it in boxes; and to suit all customers, the producer must have it in the shape in which it is wanted. The present market price for extracted honey will not pay to produce it.

Mr. Fehr said that sometimes one would sell honey below the market price, which would interfere with others making sales, and he thought Associations might do something to fix a uniform price.

After the consideration of these topics with a good degree of interest, and attending to some miscellaneous matters, it was

Resolved, That the Secretary be, and hereby is instructed to send an abstract of the proceedings of the Association at this meeting to the publishers of the AMERICAN BEE JOURNAL, and the *Bee-Keepers' Magazine* for publication.

The Association then adjourned to meet at Rock City, Ill., at 10 A. M., on the first Tuesday of May, 1878.

Rock Run, Ill. T. E. TURNER, *Sec'y.*

Marketing Honey.

READ BEFORE THE MICH. CONVENTION.

In this subject I feel that I have a duty I am unable to discharge. Allow me to assert that the successful display of honey is a trade all by itself, scarcely inferior to the production of it.

1. We cannot expect to succeed in this branch of our pursuit, unless we can maintain a certain degree of independence in the markets.

I hope each member here will strive to induce consumption, and thus create a demand; but, we must recollect that the object of this meeting is to learn of each other how to increase production.

We must do all we can to realize good prices for our surplus product, if we wish to maintain a reputation for our pursuit.

High prices for honey promoted apiculture from its side-issue condition to its present high standard. A small number of specialists have done more to place bee-keeping where it now stands than all the bee-owners combined.

It was not extractors, Italian bees, nor comb foundation, but enthusiasm, stimulated by war prices, that did it.

I will try to put forth my ideas of independence in the honey market. I know of producers who sold a part, or all of their crop of bright comb honey, at from 10 to 12 cts. per ℔. Simply because it was stored in ugly boxes, unattractive and unfit for market. Now, this low sale not only injured the one that made it, but every honey producer.

A bee-keeper, after looking at my honey boxes, said to me: "You will sell all of your honey as fast as you can hand it out, at good prices." Said I, "If my neighbor stores his in a nail keg, he is going to sell it, if he gets but 1c. per lb., and the purchaser is going to eat it; and when he is full of this nail-keg honey he does not want mine at any price; much less at a price that will pay me for putting it up in attractive and convenient shape." Hence, both of us producers must lose, and the nail-keg man the most. What we most need is uniformity and attractiveness in our packages. I believe every honey producer should be prepared to ship, in neat, safe, and attractive shape, directly to the consumers or retail dealers. The more, because honey is a product that is consumed and produced in nearly every place in the civilized world.—Let us protect the dealer, and remember that he is an unavoidable and useful member in the commercial world, and that it is worth more to retail our honey to consumers, than he charges us for doing it.

Proper sizes and styles of boxes and cases, readily transportable, will avoid a glut in the market in one locality, and scarcity in another, which is the wholesale dealer's success, and the producer's ruin.

We see in the journals such statements as these: "I have no trouble to sell my comb honey at 25 cts., and extracted at 20 cts. per lb." Then another, "Can you tell me where I can find a market for my honey? I ask 18 cts. for comb, and 10 cts. for extracted,"

All this proves that we have no rational system of storing in attractive shape, and shipping this product of ours.

I think the day is close at hand, when the price of honey will be more uniform through this country. Our show table is well supplied with the means to bring about such a result.

In regard to sizes of packages, we shall find that our goods are subject to the same laws of trade that all others are. We must store comb honey in at least 2 sizes of boxes, and perhaps 1 size of section frames besides. Reasonably small packages will be found most saleable, but I consider the 4¼x4¼ in. sections, as used by A. I. Root, too small.—It shows too much tare. I believe that the coming price of honey will induce consumers to buy more than a thimble full at once; and, of course, we prefer to store in as large boxes as will sell well, and ship safely. Our cases for comb honey should be of bright, clean wood, not holding over 30 lbs., and as cheaply gotten up as will answer the purpose, and never make any calculation to have them returned. By freight is the safest and cheapest way to transport honey; and if you ship by express to get your cases returned, you take extra risk of smashing, and pay more for a dirty, and perhaps broken cases than the original cost; besides, you need a set of books to keep track of their whereabouts.

To sum up, does any manufacturer or dealer do business on the return-case principle, except where the contents are to be at once removed, and the cases kept from sight, and goods sent by express, because perishable (like oysters in bulk) and then return case free? If soaps and candles can afford a box, so can our valuable product.

I have seen a notice of this meeting in nearly every newspaper I read. If half the effort that we have put forth in this direction could be used to help us sell our extracted honey, candied, and inform the public that it is pure and clean, too; and that nearly all syrups and molasses are not, it would work a change for the good of both producers and consumers, while liquid honey has probably the worst of names, as regards its purity. This audience knows that there is a less per cent. of adulterated honey in the world than of any other commodity, possible to adulterate.

There is no use to deny the fact that we have done little or nothing to inform the public of the superiority of extracted honey over its competitors. We have been too busy manufacturing supplies, and bee-keepers to buy them. If we expect to increase the demand for our product, we must increase the consumption. We can do more unitedly, than alone. Nearly every leader in the convention has asked the press to help forward production; and they have often done so. Who has asked them to forward the consumption of honey? Production of honey is in advance of consumption, in this country, to day.

Supply and demand has the same influence on the success of our business as upon all others. We must strive to keep demand in advance of the growing supply, or some of the weakest among us will be forced to abandon the business. JAMES HEDDON.

Correspondence.

For the American Bee Journal.

Fertilization in Confinement.

REV. M. MAHIN, D. D.

That by careful and judicious selection, bees, as well as any other stock, can be improved, does not admit of a doubt. Very great differences are observed in the temper, and in the productiveness of swarms. This is true even of those that are very nearly related. I have raised two queens from the same mother, at the same time, and have given them, as nearly as possible, the same advantages as to bees and combs; and while one colony has been prosperous, becoming strong in numbers and rich in stores, the other has hardly lived. Now, a queen raised from the poor one might be prolific, and produce good workers; but any one would prefer to have a queen from the prosperous colony, as more likely to possess the qualities desired.

With our modern facilities for handling bees, it is easy for us to select the mothers of our queens; and it is a fortunate fact, that in bees the mother impresses her own character on her progeny much more strongly than the father does. In many cases, the progeny of a pure Italion queen, fertilized by a black drone, will be so nearly like pure Italians that only a practiced eye can detect the difference. I have now a colony of half-blood, bred from a very finely marked stock, in which I have failed to find a single bee that has not three distinct golden bands. Yet, the want of uniformity in color, some being light and others dark, convinces me that they are not pure. On the other hand, a black queen mated with an Italian drone, will produce bees with little trace of Italian blood. Notwithstanding, it is more important to have queens bred from good mothers than from good fathers, it would be a great advantage if we could select the drones as well as the queens, from which our breeding stock is to be reared. Can we do it? And if so, how? These are questions which have not yet been satisfactorily answered. I have been, for several years past, among those who believe that the object can never be successfully accomplished. I have no faith in any plan that allows the young queen to retain her ability to fly. It is impossible to so construct the entrance to a hive that the workers can pass and repass, and that a virgin queen cannot. There is usually a little difference in the thickness of a virgin queen and a worker; but it is so little, that where the worker can pass, the queen will manage to squeeze through; and then all the labor is lost.

If the fertilization of queens can be controlled at all, I think the first thing to be done is to clip their wings, so that they cannot fly. Then the queen must be watched, and when the young queen comes out, set a wire cloth cover, (such as are used to cover dishes at the table), over her, and catch such drones as you want and put under the cover with her, leaving her in the sunshine and where the workers of her own colony can feed her through the cover. If the experiment does not succeed within 10 or 15 minutes, let her go back into the hive and try it again the next time she makes her appearance, which will probably be in 5 or 10 minutes.

I have not tried this plan, but I recommend it to those who have the time and the patience to give it a fair trial. My reason for thinking that it may succeed is that queens that cannot fly sometimes become fertile, copulation taking place, no doubt, outside, in front of the hive.

When I was a boy, my father and I were looking at a couple of swarms of bees, hived, perhaps, the day before in log gums, when we noticed one of the queens come out and fly away. We supposed, that being dissatisfied with the domicile we had furnished her, she had gone to the woods to find a hollow tree, to which she might lead her subjects. On her return, my father caught her and clipped one of her wings. Observing the other hive standing on the same bench, and next to the one just mentioned, we saw the queen come out of it, and she was cought and clipped also. And then trouble began. Neither queen was impregnated; and we had to watch them day after day, and return them to the hives, until one time when the family was away from home until after dark, one of them staid out all night and perished; and the bees went in a body into the hive of their next door neigbors, and went to work. We saw nothing more of the other clipped queen until swarming time the next summer, when she came out with a large swarm of bees. She had been fertilized, and had got back into the hive, the day we were away from home.

A few years ago, I clipped a wing of a young queen to prevent her fertilization, that the drones in her hive might be spared to fertilize some queens that were about to hatch. It was late in the fall, and most of the hives, all, in fact, that had fertile queens, had destroyed their drones. After all, my young queens had been impregnated, I opened the hive containing my clipped queen, and discovered that she had been fertilized; probably, within the previous hour.

These facts, and other similar ones that have been reported, seem to me, to point out the line in which experiments should be made, if we would succeed in breeding from the drones of our purest and best stocks.

Logansport, Ind., Feb. 13, 1878.

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For the American Bee Journal.

Introducing Virgin Queens.

It appears from reports in the JOURNAL that it troubles many bee-keepers to introduce virgin queens. For the benefit of such, I will give my method of introducing, in detail, thinking it has some advantages over any method that has come under my notice. It may not be new to some, but if not, it has not yet made its appearance in the AMERICAN BEE JOURNAL, to my knowledge.

When the apiarist wishes to introduce virgin queens to hives that have swarmed, to prevent after-swarms, or for any other purpose, let him go to a hive that has piping queens, remove the frames without smoke, if possible, or use as little as may be necessary to subdue the bees, in order not to frighten the guards away from the cells, or you may defeat your object, by allowing the queens to escape without securing them in the cells—therein is where I claim the advantage of this plan over others with which I am acquainted.

With a small knife remove the cells that have queens ready to emerge, which may be known by their having the lid of the cell cut loose part way around, and would come out any time if they were not kept back by the guard of workers that are stationed around such cells for the purpose of keeping them prisoners, and supplying their wants, which they do by the queens thrusting their tongues through the opening at the side of the lid, to receive the proffered food, tendered by the faithful workers.—Use care in handling the cells, and, as fast as removed from the comb, lay them on their side, on a small board with a cleat on one end; lay the open end of the cells close against the cleat, to prevent the escape of the queens till you get all, or as many as you wish to remove; then take the board containing the cells, go to the hive you wish to re-queen, take a cell in one hand, hold the open end close to the entrance and with your knife assist the queen to remove the lid, and let her run into the hive without touching her with your fingers, and she will be well received.

I have introduced many by this plan, and found it the most uniformly successful of any method that I have tried. I have had a few cases where virgin queens were put in very early in the season, to prevent after-swarms, become fertile and fill the hive with brood so rapidly that they would swarm out with preparations the same as prime swarms; but such cases are very rare in this climate.

Last season I introduced 8 queens, the same day, to as many hives. A part had swarmed naturally, and the balance were artificially swarmed; the queens were all well received, and in due time were laying.

By the way, one of the 8 that was introduced to number 14, met with quite an adventure before she reached the hive.—The bees in said hive had been very irritable for several weeks, and would show their pugnatious disposition on approaching the hive, without any provocation whatever. I was very particular to approach this hive with care when giving them a queen. I held the cell near the entrance, and with my knife pushed open the lid. Just as the queen started out of the cell, an angry bee came out of the hive, and started after her; she ran about six inches on the alighting board and then turned to give battle, but it was as decisive as short; she had no more than turned facing her antagonist, before the worker was in her vice-like embrace; the queen curved her abdomen under the worker, stung and dropped her instantly.—She turned round and walked into the hive, as unconcerned as though nothing uncommon had happened. The abdomen of the worker contracted, she crawled to the edge of the alighting board and dropped off.—This was all done before the queen had been out of her cell one minute, and was the first time I ever saw a queen sting a worker.

For preventing after-swarms, this plan has many advantages. I introduce any time, from the day that a hive swarms till just before the young queens that were left in the hive begin to hatch, and have very little trouble, but I prefer to introduce within the first five days after they swarm.

Warren Co., Pa. JNO. F. EGGLESTON.

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For the American Bee Journal.

Sending Queens by Mail.

Last season an attempt was made to get the Post Master General to reconsider the instructions from that department against sending queens by mail, but that august dignitary would scarcely condescend to even listen to the request. Now, we thought at the time that it would have been better not to agitate that question any more, but let every body continue to send queens by mail. We have always done so, unless ordered by express.

We put them up in sealed packages, and pay letter postage, and enclose a letter at the same time, so that we are simply sending a letter with a bee, or two or three in it; and if properly put up, the postage would not be more than double letter postage, at the farthest; and if several queens are sent at once, it would be less.

The advantage of this plan is, that the postmasters have no business to know what is in your letters, and you are under no obligations to tell; at least, I don't know of any law that authorizes postmasters to open letters, nor to make the writer tell what is in them.

Put up your queens in sealed packages, put on letter postage and drop them in the letter box, and then let us see where the postmaster is that would dare not to send them.

Postmasters are instructed not to allow

bees to go in the mail, but unless you tell them when you are sending, or put them in the class of mail matter that they are allowed to open, those instructions are entirely defeated. But, if you go to the office with your bees, and say to the postmaster: "Here are some bees; what is the postage?" he is bound then to tell you that they are not mailable. N. CAMERON.

Lawrence, Kansas, Jan. 15, 1878.

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For the American Bee Journal.

Doolittle's Report.

My mind has often reverted to the great achievement of G. M. Doolittle, that appears on page 347, in the October number of the AMERICAN BEE JOURNAL, in securing 10,284 ℔s. of box honey from 65 colonies out of 80, worked for box honey. It is truly splendid, and has led me to a closer scrutiny of the report than if it had been smaller; and it has brought to light some facts which I wish to be made as general as the report itself. I do not charge, that Mr. D. intended to deceive, as I think it has always been his custom to give the old stocks credit for the honey made by the full force of old stocks and increase, which is calculated to mislead the public, and especially novices grievously. Briefly I will state what I believe to be facts in the case.

He says the average yield per stock worked for box honey was 158 ℔s. each.—Now we are left to infer that though he increased to 152 stocks, the increase gave him *no* box honey. And yet, he says in an article headed, "Increase, and preventation of increase," read before the National Bee-keepers' Association. in New York, Oct., 16, and which appears in the November AMERICAN BEE JOURNAL, page 370, "Thus it will be seen, that we make our new stock from 2 old ones. and they are *all* in the best possible condition to store box honey;" and again he says in his report, "Thirteen old stocks that were weak were broken up into nuclei, to raise queens from."

Now, we will figure a little. If, as he says, 1 new stock is made from 2 old stocks, and all equally strong, and he had 65 old ones that he worked for box honey, then he had 65 and 32, equaling 97 old and new to box. I am credibly informed that he boxed 110 stocks, the 13 wanting to make up that number (110) was probably by doubling up the nuclei that raised the queens for his increase. Thus his nuclei played an important part in his yield, by giving his new stocks fertile queens, which we know to be a great aid, and should be considered.

A boss carpenter says, "*I* built that house!" Yet, he did not. He supervised and aided; many men put their muscle to the work.

> "Anvils rang, and hammers beat
> Before the work was called complete."

And so this aid was extended in the building up of that pyramid of honey, by Mr. D's 30 nuclei. But I have digressed a little. He has boxed those 110 stocks, 28 or 30 boxes, (2℔., Betsinger Sectional Boxes), to each hive, in the Betsinger Sectional Case, which gives him 60 ℔s. capacity for each hive. The result is 10,284 lbs. of box honey, or 93½ lbs. of honey to each of the 110 stocks, *gross weight*. Now, *wood* and *glass* is not honey. There were used to box this honey 5,000 boxes, weighing 2 oz. each, 625 lbs.; 10,000 lights of glass, (41 boxes), 50 lbs. to the box, 2,050 lbs.. Tare, 2,675 lbs.; leaving 7,609 lbs., or an average of 69 lbs. each, of what the world *calls* honey. 158 minus 69 equals 89 difference.—Why, this does not look so *large*, does it?—And yet, I believe it *strictly* true as to the first average, 93½ lbs.; the tare may be slightly incorrect on the last average 69 lbs. If I am wrong, Mr. D. will please correct me. I have no other object than to review his report, as I would the balance sheet of a banker's statement, ere it went to the public, if it were laid before me for inspection. And this 69 lbs. average is presuming that the other 42 stocks of increase gave no box honey.

I do not wish to belittle Mr. D's. report.—His success the past season has been good. He is an energetic enthusiast in his vocation, which, added to a good season and good appliances, has made that success possible.

May I give you Mr. Doolittle's report in my simple mathematics, and you shall judge if it be correct: I had 80 stocks in spring; 13 weak. Increased to 152 colonies, in good condition for winter. I have taken of box honey, 10,284 lbs.; of extracted, 803; total, 11,177 lbs. Forty-two of this increase I presume to be made after the box honey season, leaving 110, and 2 used with the extractor make 112 stocks. An average of 100 lbs. to the hive, gross weight, tare as above, 26.75, or 24 per cent., nearly.

This is splendid for an average, and should satisfy the ambition of the most aspiring. CHAS. D. HIBBARD.

Auburn, N. Y., Dec. 4, 1877.

* * *

For the American Bee Journal.

The Honey-Producer's Future.

WHAT SHALL IT BE?

Who can tell? I cannot. Even the youngest of us have lived long enough to see several new kinds of food preparations come into existence and general use. These several new kinds of food appeared to contain elements which the human system soon learned to *demand*. This does *not* seem to be the case with honey. *Our* product seems to be only a luxury, that a part of humanity like occasionally. Many persons cannot bear it. It is said that once honey was used very extensively. That statement is true. It is also said, that at that time honey was the principal "sweet" known to man. It is further stated, that within the last few centuries cane sugars have sprung into market and into general use, and honey has stepped to a back seat. All true. Had we no sweet but honey, the natural constitutional demand for sweet would place it, with its several acids, as a *staple commodity*.

For three years I have placed the choicest of pure machine-extracted honey upon the tables of my neighbors at 11½c. per lb.,

$1.25 per gallon—11 lbs. for a gallon. *Every one* speaks in the highest terms of said honey. I have taken pains to get the people to sample it, that they might have that honey that was best suited to their individual tastes—clover, basswood or fall flowers. I find many preferring the dark honey, but most the clover.

In 1875 I sold 125 gallons, in 1876, 40 gallons, in 1877, up to date, 15 gallons, in round numbers. All this time I have sold my bright honey below barrel prices.

Now, I credit the cause of this falling off to two sources:

1st. "Hard times," or comparative scarcity of money; and,

2d. To the fact that honey contains no elements that fastens itself to the system as a necessity. At this same time oysters have been sold at one price, and the trade in this town has rather increased. We think we *must* have them every-so-often.

We "*like* honey once in a while." An arcle of food may taste delicious to the palate without having the power to kindle an appetite that amounts to a demand. Whisky and tobacco are naturally noxious to the taste, but after given to the system a few times they *create* a demand that hard times, high prices, and revenue taxes can't counteract. It seems to me we need not look in the direction of "increased demand," as far as table use is concerned, to take the surplus crop of honey that the American flora can spare, and that these "gush over" book and supply dealers say "must be gathered."

Now comes the question, What is the value of honey for cooking, brewing, ham-curing, wine-making, and such unlimited sources of demand? If honey is better than glucose for beer, why? It is many times sweeter; but cane-sugar is many *more* times sweeter. Honey is thicker, and contains more vegetable matter than sugar; but glucose is much ahead of honey in this respect.

If honey is to rival these products above mentioned, won't some one please rise and explain why? I hope such may be the case, but in so important a matter as this is to my future earthly welfare, I beg of the knowing ones for the why and wherefore of their belief that such will be ours to enjoy. I am aware that whisky and tobacco make a morbid demand for more, but many kinds of food all of which were new some time in past history, have *become a necessity* to our well-being. I am of the opinion that honey is not to rise above a luxury of occasional enjoyment, and must be a beggar in every turn of the times.

To the source of an adjunct to the manufacture of some other commodity do I pin my last hope for the future welfare of the honey producer. Please let us hear of any new ray of light that has been discovered in that direction by any one.

I may be wrong in my conclusions, and may it be that I am, but when I hear those "enthusiastic" ones (and Prof. Cook says bee-keepers are "enthusiasts" universally), I think of the Rev. Joshua Billings' definition of an "enthusiast." He says, "An enthusiast is one who believes five times as much as he can prove, and can prove five times as much as any one else will believe."

We are told that honey is about to become an article of general use, and yet many of these same persons tell us to put up this "staple commodity" in little "tiny" cards —say 4¼x4¼—and then be sure to put glass enough on both sides of the honey to outweigh it, as the glass being transparent will not be objected to. Suppose you try some *other* staple in that way. For instance, put up granulated sugar in one-pound glass jars, baking-powder (a thing of a few years' time) in glass boxes. Why, we can't stand *tin* boxes any more. It has become a staple in towns and cities at least, and we buy in bulk. As Mr. Bingham said at Convention, about house apiaries, "Talk may say one thing, but what do actions say?" In my opinion, those dealers who beg for *little glass* boxes haven't got very far into the staple business yet. A. I. Root's and others' methods of shipping sections in *glassed cases*, and only asking the consumers to buy as little as possible besides the HONEY, looks more to me like an effort to place honey among the staples. Nothing can stand more in the way of the general introduction of our produce than so much tare on comb-honey, and the taking of clear honey before being capped and thoroughly "ripened."

Dowagiac, Mich. JAMES HEDDON.

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For the American Bee Journal.

How to head off the Robbers.

Occasionally we have, in the JOURNAL, complaints from bee-keepers that thieves break open their hives, steal honey, or commit various depredations.

To those who are in danger of suffering loss in that way, I would suggest a very good remedy, namely, the "Burglar Alarm Telegraph."

About two years ago, I put up one of my own construction, with wires running underground to a smoke-house, and signal bell on the mantel-piece in my bed-room.—Although the wires were laid by myself, and every endeavor made to keep secret the object and uses of the apparatus, it got out one morning, by the smoke-house door being opened before the current was turned off and while a servant was in the room where the alarm bell was placed. In a very short time thereafter the news was pretty generally circulated, especially among the colored portion of the neighborhood, that my premises would be a very dangerous place to visit after the usual hours for paying neighborly calls. Private inquiry convinced me that bacon would have to be very scarce indeed before any of my "friends," especially the colored ones, would try to replenish their larders at my expense.

For the benefit of those who may wish to try this defense against robbers, I will give such points in the construction of a burglar alarm, as will enable any one familiar with the principle of the telegraph to put up one of their own:

For a conductor, use copper bell wire, number 18; the size may vary considerably from that without disadvantage. If to be laid underground, half of it must be insulated, and all the doors or gates from which signals come must be on the insulated line; the return circuit may be of naked wire and lay in the same trench. I will here say that a return wire is necessary for short circuits and weak battery power, ground connections in such cases not working well.—Cores of magnets are of soft iron, about ⅜ of an inch in diameter, bent horse-shoe shape; wrap on 8 or 10 layers of the insulated copper wire. The alarm bell may be rung by an ordinary clock alarm. The magnet connected with the circuit wire holding the controlling wire of the clock alarm in such a manner that when the circuit is broken and the magnet ceases to act, the clock alarm rings until it runs down, or is stopped by hand. The battery used may be a very simple Daniell's battery of zinc and copper in blue vitriol, such as is used in telegraph offices; one small cell will suffice, and need not cost over 50 cts. per month to run. If preferred, the alarm bell may be connected with another small battery of the LeClanche pattern, so as to ring continually until stopped at the instrument.

I corresponded with parties in New York, who deal in electrical apparatus, and they recommended, for underground wires, insulated copper, at 8 cts. per foot, for both outgoing and incoming wire. I insulated my outgoing wire by wrapping two coats of cotton thread, and two coats of wrapping twine and then boiling it in a mixture of coal tar and gum shellac. The incoming wire was used as aforesaid, without insulation. The way I wrapped the thread on was by using a small piece of gass pipe for the spindle of a spinning wheel, upon one end of which was a block, carrying two spools of thread. The wire to be wrapped was pulled slowly through the hollow spindle, while the spools revolved around it; thus wrapping on the thread as thick as needed.

The gates and doors, or bee-hives, to which the alarm is connected, have the usual "contact plates," two small pieces of brass, to which the wires are attached, so that when the door is opened the plates separate, thus stopping the current of electricity and causing the alarm bell to ring.

The cost of apparatus, such as mine, need not be more than $5, and two or three days' work to put it up. CORN CRACKER.

Feb. 1878.

For the American Bee Journal.

Some Apologies.

I wish to apologize first, for doing anything that might make it necessary for my name to occupy so much valuable space in the pages of the AMERICAN BEE JOURNAL, as it does in the March number.

When I wrote as I did about John Long, I supposed I could turn at once to the pages of the *British Bee Journal* for the evidence; as I find in place of it only the complaint given on page 28 of the June number, for 1876, I am forced to the humiliating conclusion that I had got the matter mixed up with some other complaints, of which there have been quite a number. I certainly did very wrong not to have looked the whole matter up, and made my evidence complete, before going into print. I beg Mr. Long's pardon, and think under the circumstances, I should do a little more.—As you say he is trying to pay up all old scores, and to stand square with the world again, I will lend a helping hand, by sending comb foundation to all who sent him money and never received their goods. If Mr. Long thinks proper, he can pay me back when he gets around to it. He advertised and received money under the name of John Long, and no other name appeared in his advertisements or letters, and I never knew he had another name until it was announced that Wm. Hoge and he were one and the same man. I appealed to him through *Gleanings*, and gave his address to those who had sent him money, but never learned that any one could get a word from him, until you mentioned in the March number that he was going to pay all up.—Friend Hoge, would it not have been kinder to have written as much to your creditors?

I am very glad indeed that friends Doolittle and Betsinger have not quarreled.—May we not soon have a little card with both the names signed to it, saying that they are friends, and only had a difference of opinion?

I got the impression that each competitor was to pay $7.00, from the single line, on page 310, of your September number:—"One fee ($7.00) will be charged." The same was in a circular sent me. I beg Messrs. Thurber & Co's pardon, and will try and be more careful.

The rest of the charges friend D. makes, are, I think, mistakes which he will admit when I show him the letters he has written me. As this can be done privately, I think no more time need be taken up with the matter here.

In regard to the last clause, I frankly admit, that Satan must have been pretty close to my type writer when I wrote that article "Trouble." I see now, that I was off the track, and I humbly beg pardon of all parties.

If I have boasted of my goodness in *Gleanings*, I agree with you, friend D., it *was* all a sham, for I am a great ways from being "good," as you are all aware.

To friend Heddon I would say, that I did not intend to advise selling honey for 5c. as long as we could get more. I would assuredly sell my honey for as much as it would bring, but I would *try* and be happy, if I could get only 5c. I guess I did owe friend Burch the $50, for I told him to make out his bill of damages for the foundation being thicker than he ordered it, and I would pay it. I did not tell friend Becktell the same thing, and therefore, I did not see that I was in duty bound to "keep the bank open." Do you think I was? I believe friend Becktell was perfectly satisfied with the way the matter was arranged, as were all other parties. I made good all I promised, paid for all the blunders I made, and filled all orders honestly. Did I not, friend H?

"The "new light," I hope, made me a better man; especially in regard to confessing my faults when I saw them, but it did not make me perfect, by any means. I cannot blame you for thinking I make but a poor show, for I often feel almost discouraged about it myself. I think I am doing right about the smoker, and as I am sure friend Bingham thinks he is doing right, I guess we shall arrange it pleasantly. If I have spoken unkindly, or jestingly of some of your queer views, friend Heddon, I beg your pardon, and will try to do so no more. If I ever go to Michigan again, I am going to see you, and I hope you will talk right out, just what you think. I very seldom quarrel with people when I can see them face to face.

Will all those whom John Long owes foundation please write me the full circumstances?

May God bless the AMERICAN BEE JOURNAL and all its readers, and help me to remember, whatever may turn up, what I have just said. A. I. ROOT.

Medina, Ohio.

[These apologies show that friend Root has been benefited by the "new light," and we are glad to see the spirit manifested, as well as the frank acknowledgements therein made. "Confessing our faults, one to another" is a duty enjoined upon us, and we always feel better for obeying it. Truly, "to *obey* is better than sacrifice." It brings down Heaven's richest blessings upon us, as well as our injured brothers.—ED.]

For the American Bee Journal.

Chips from Sweet Home.

For the benefit of the readers of the AMERICAN BEE JOURNAL, and more especially those who have not been able to call upon the Editor, in his office, I will give a brief description of what I saw there. We got off the C. B. & Q. train, walked 3 blocks, took the horse-cars, rode thereon, about 3 miles for 5 cts., to 974, West Madison St.

Here, upon the first floor, we found ourselves in a large capacious room; upon the right was quite a large collection of apiarian supplies, upon shelves protected from dust by sash. Upon the left was a variety of "honey slingers," and hives. At the farther end was the printers' cases, where our letters and articles were being set up in shape for thousands to read. In the center and on the left of the room is the Editor' easy chair and office; I should have said there were two chairs, one for T. G. N., and one on his left for his Son, for they are both as busy as bees, every day, every month of the whole year; their whole time being devoted to the interests of the AMERICAN BEE JOURNAL.

To those not accustomed to the Editor's Chair, it may seem an *easy chair*, but such, brother bee-keepers, is not the case with the editor of our BEE JOURNAL. Having served, a short time, in an editor's office, (as a devil? Oh no!) we know what some of his duties are, and will give you some idea of it: First, he reads *all* your letters and articles, *if possible.* Why, says one, can he not read them *all?* No, he cannot; for some are so poorly written that a Philadelphia lawyer could not read them; others need re-writing and correcting before they go to the compositor, and many, very many he only glances over, and is compelled for want of room to throw into the waste-basket. Were our Editor to put in all our articles, letters, and clippings from foreign bee journals, also some from home papers, he would need a journal four times as large.

Then, friends, two things are necessary. First, that he should discriminate, clipping some and discarding others entirely. Secondly, on our part, to *boil down* our letters and articles, telling our ideas in as few words as possible, so that they will occupy as little space and convey our ideas as forcible as language will permit. First, then, be sure you have something to write that others will want to read; secondly, write it in as few words as possible, and, if you are not accustomed to writing, look over your article and see how much you can shorten it; by thus doing, you will improve your article for publication.

These articles *boiled down*, (*multum in parvo*), are the ones more eagerly read and longer to be remembered than those long, dry, tedious columns. So, in conclusion we would say *boil them down*.

D. D. PALMER.

Ventilation of Bee Houses.

ARE BEE HOUSES NECESSARY?

There has been, and still is a strong effort upon the part of some to do away with houses to winter in. The substitution of cushions and chaff mats are intended to supersede winter repositories; but, if a repository is so constructed as to be a complete success under all conditions of the atmosphere, it is far in the advance of all mats and cushions, bundled about the bees on their summer stands.

1. The bees never fly and waste.
2. The value of a house is soon saved in honey.
3. The bees are prepared for winter, and put away with less expense.

BEES CONSTANTLY NEED FRESH AIR.

Those who have been observing have learned, from the influence of warm air upon their bees in winter quarters, in Dec. last, to keep bees quiet, they must be constantly supplied with fresh air, in sufficient quantities to preserve a normal condition of the atmosphere.

WHAT SHOULD BE THE TEMPERATURE?

That depends altogether, or largely so, upon the purity and motion of the air.

Place a thermometer at the ceiling of a bee house 60° fahr., and another at the floor 54° fahr., and the bees at the floor 54° are wasting more than those above at 60° fahr.

There is no effect without a cause.

WHAT CAUSE PRODUCES THIS EFFECT?

The normal condition of the atmosphere has been destroyed by the respiration of too many bees for the amount of circulation in the room.

As the oxygen is consumed, the nitrogen becomes light and ascends upward, leaving the carbolic acid gas to effect the bees at the floor.

If the air is pure and the motion strong, 50 or 55° is not too warm.

HOW TO VENTILATE THE ROOM.

Every bee house should be furnished with a refrigerator, an underground air duct, which will at all times, not only furnish fresh air, and a strong current, but cool air when the atmosphere is warm, and warm air, comparatively, in cold weather.

Atmospheric pressure being 14 lbs. to the square inch, run an air duct through tiling, of 6 in. capacity, 5 feet underground, for 200 or 300 feet; the opposite end from the house, or mouth of the refrigerator in the house, about 6 feet the lowest, with the slant of the ground, and a wonderful current of air is created in the house, on condition that it is permitted to escape above.

When the temperature of the atmosphere in the bee house and out doors are the same, the air would stand still in the air duct, and must be started by a stove-pipe, connected with the flue or chimney in an upper room, while the air rushes in at the base of the chimney in the cellar or bee house.

WILL IT PAY?

When we take into account the pure, healthy, and cool (not too cold) condition that our bees are in, and the amount of honey saved by housing,—and not only so, but how this cool, pure air can be utilized in summer—saving milk, butter, meat, etc., forbiding everything to rust or corode, it must pay.

This warm winter admonishes me that my bee house is incomplete without a refrigerator, and it shall have it.

I removed the last of my 237 colonies from their winter quarters, on March 1st, without the loss of a colony or queen during the winter.

This establishes one fact, that plenty of heat and fresh air is the great secret in wintering bees.

The loss of queens in a temperature of 35° or 40° fahr. will average about 1 to every 25 colonies.

I had my 237 colonies and some of my neighbors' bees in a room 25x12 ft., and the most of the winter, the mureury stood 55° to 60° fahr., with the doors and windows open nights.

Camargo, Ill. A. SALISBURY.

For the American Bee Journal.

Dadant against himself.

MR. EDITOR:—If any of your readers will take the trouble to go back to vol. 12, page 188, they will find a short article, read before the Michigan Bee-keepers' Association, on the improvement of the Italian bee. My object, in that paper, was to draw attention to the fact that the Italian bees were *not* uniform in color—not yet a fixed variety. I pointed to the drones, as one of the means whereby we might obtain a more uniform color; and also stated that there were a great many dark, and even black bees in Italy. Thus showing the necessity of a more careful method of breeding.

Mr. Dadant, on page 205, has criticised my remarks, and says there are no black bees in Italy; and, as I understand him, not even hybrids. And further, offers to pay $200 to any one that will prove it.

Now, seeing I am included among those who believe that there *has* been black bees there, if not now; and, of course, plenty of hybrids, I endeavored, in vol. 13, page 127, to "give a reason for the faith that is in me," by giving the testimony of some very eminent men upon the subject. Men, too, whose evidence will be hard to set aside.—I also gave the evidence of Mr. Dadant himself. I extract the following from my reply as then given:

"Vol. 8, page 86. Mr. Dadant was in Italy, as late as 1872. He writes: 'Sartori says that there is some *black* blood mixed with the Italian, on the frontiers of Italy.'—Again, on page 87, Mr. D. makes this remarkable statement: 'I am now wondering why Mona wrote that all the bees of the Italian peninsula were pure Italian, when he *ought* to have known that there were such enormous differences in their color and character.'"

Now, is it not very plain, that when he wrote the above, that he believed that there were impure or hybrid bees in Italy? I have no knowledge, however, of *when*, or *why* he changed his views. In my last reply, I said nothing about his offer; but, seeing that he paid no attention to the evidence given, and has made another bold challenge in vol. 13, page 308, I now claim the $200. I have no idea, however, of letting Mr. Dadant be the judge or jury, but suggest that you appoint as many intelligent bee-keepers as you think best, yourself included, and let them say whether I am entitled to the money or not. I will cheerfully abide their decision.

GEORGE THOMPSON.

Geneva, Kane Co., Ill.

[We are sorry to be called upon to select a committee to decide this question—much preferring some other person to do it. But, as it seems to be so decided by friend Thompson, we will, if friend Dadant acquiesces in such appointment, suggest that friends A. I. Root and A. J. King act with us, as such committee.—ED.]

For the American Bee Journal.

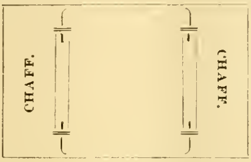
Division Boards.

DEAR EDITOR:—I have derived so much benefit from the pages of the JOURNAL, that I desire to contribute my mite.

Now that the use of the division board is becoming so important to the successful wintering of bees, what we need is one that will meet the requirements. I think every bee-keeper will agree that absolute accuracy in dimensions of hives has not been attained.

I have a variation of ¼ inch in some, owing to a variation of ⅛ inch in the plaining-mill dressing. It is plain that a rigid division board will not be interchangeable, and divide off tightly any way. I have devised an improvement, and find it so valuable to me that I submit it to the fraternity for approval.

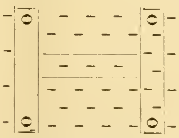
It is the ordinary board, ½ or ⅝ in. thick, and sawed ½ in. or ¾ in. short, and slotted by a saw at the end, so as to take in a strip of thin rubber packing, so as to project about ½ in. I prefer one at each end. It makes as nearly an air tight joint as necessary, and holds its place admirably without hanging, and needs no top bar or projection, and will, I believe, answer fully if the rubber is at each, projected inward towards the combs to support chaff packing in the outer space, and so do away with chaff cushions for all who use movable bottom boards, thus:



It is simple and cheap. In the spring all that is needed to unpack is to lift off and let the chaff drop, and it is done. But really, with a *tight* board, chaff is not needed so much, for air is a non-conductor of heat.

I have also to suggest an improvement to the shipping case. It is a thin false bottom for sections and a frame for those who ship in 3 section frames with a hole at each corner for the insertion of a short rubber cylinder to fit close, with a projection proportioned to the weight. The rubber can be got in coils and cut off squarely and inserted; ⅜ or ½ in. round rubber will do. This will add very little to the cost of crates—far less than Mr. Hoge's plan, and save much weight. One inch additional depth of crate will be required. The holes must not be bored quite through.

For Sections.



For 3 sec. frames.

J. W. PORTER.

For the American Bee Journal.

Extracted and Adulterated Honey.

This is now the question of the day, and a very vital one, too.

Probably, the most useful thing done by the National Society, since it was founded, was the publication of "*Facts for the public*;" from which I intend to quote, for argument.

> "Comb honey is no better than extracted honey."
> "Almost all pure extracted honey will granulate."
> "The granulated state is a fine evidence of purity."

The honey question lies entirely in those propositions, and if they were only properly applied by all, there would be no need of discussion on the subject.

For instance, Prof. Cook argues that all extracted honey, if pure, will granulate; that granulation is evidence of purity; and still, he advises, in the AMERICAN BEE JOURNAL, (p. 79), to melt honey before selling it.

Now, a few questions: Why does he advise to melt honey, instead of selling in the granulated state? Does he not see, that the moment honey becomes a liquid, it is on a level with the adulterated, which is always liquid, and drowned in 60 or 75 per cent. of glucose? Is he not then favoring adulterators, by making his honey look like theirs?

Will he say that honey does not sell in the granulated state? Then what will he do if his honey granulates in the hands of the purchaser? Would it not be better to teach them that "the granulated state is a fine evidence of purity?" Or, is he willing to keep up a *delusion*, for the sake of selling a little honey *now*, and to help injure the sale of the evidently pure honey of the large producer, besides running the risk of having honey stamped as "doctored," by *those who know* that it should be granulated, if pure?

Nay; Is it rational to take the trouble to melt granulated honey, for sale, when he acknowledges that granulation is the *only easy* way to ascertain purity?

I agree with the decision of the North-Eastern Convention, on this subject, (page 90), provided this paragraph be made to read as follows:

> "It was agreed that the effect is very injurious, both to producers and consumers of honey." ....
> "If honey is kept from candying, it is adulterated."

Friends, please turn to the cover page of the AMERICAN BEE JOURNAL; it tells you that our old and reliable periodical is devoted to the production of *Pure Honey*. Yes, pure! And we, U. S. Bee-Keepers, will stop that adulteration, in a short time.

Friend Root seems to be under the same delusion as Prof. Cook, for he says:

> "Some attempts have been made to get honey into a marketable shape in its candied state; but, so far, have been unsuccessful."

We have had a honey extractor ever since it was invented. In fact, we had one made, according to our ideas of it, before any were manufactured for sale. Since that time, we have raised more extracted than comb honey, and sold it in the *granulated* state, at paying figures; except the first season, when we had extracted it too soon, and it was thin and watery, of poor quality, and, of course, not entirely granulated.—We then found some customers who did not like granulated honey, or who imagined that it was "doctored;" but *now* we find that it sells *better* than liquid honey.

We raised, this season, some 13,000 lbs. of honey; 9,000 or 10,000 lbs. of which being extracted. One-half of it was sold in our home markets. The rest, together with the comb honey, was sold in St. Louis, where it sold very readily. Now, all we have left is about 500 lbs. of comb honey, and 200 lbs. extracted.

Conclusion: We will raise nothing but extracted honey.

I cannot praise too highly, the ideas of Mr. Clute, as given on page 73, showing that low prices will *not* injure the bee business; but, on the contrary, will encourage it.

We have sold honey this year at 10c. per lb., and at that price *it pays*, and every body can buy it.

May I make a prophecy? In 10 years from now, granulated, extracted honey will alone be in large demand, and will sell as high as comb honey, if not higher. Honey will then be put up, like butter, in tin or wooden pails, or in jars; and not in cans or barrels, with a faucet to draw off, like glucose.

A few words of thanks to Messrs. Hetherington, J. H. Martin and others, who support the true way. We shall be the winners, for tens of thousands follow us, and approve. C. P. DADANT.

Hamilton, Ill., March 12, 1878.

For the American Bee Journal.

The Norway Maple.

A CORRECTION.

After reading Prof. Cook's remarks on "Norway Maple" in your last, I suspected a case of "mistaken identity" for I was sure if he and I meant the same tree he would have spoken differently. The tree in question is quite common near me. I have several fine specimens on my lawn, and they are planted on both sides of the avenue all along Prospect Park. They are called here by the people and nurserymen "Norway maple," and I have accepted that name for them without question; but now, examining the descriptions, I find that they do not answer to that of *Acir platanoides* but as far as I can judge by such parts as I can now find and recollection of other parts, they are the *Acer pseudo-platanus* or Sycamore maple. I will add that no other maple, and I believe, *no other tree*, not even the famous linden, can compare with them in the quantity of honey they yield. They bloom just before white clover, and the trees are literally covered with it—100 to 1 on the basswood—and every flower fairly drops with honey. The air is filled with their odor for rods around and the bees swarm over them from early morning to dark, and even all night if there is moonlight. I did not, at first, like the flavor of the honey, but after eating it freely for some time I enjoy it almost as well as buckwheat, which I take for my standard. Several old bee-keepers who have visited me and to I have sent specimens, pronounce it, on first taste, the finest honey they ever saw. It certainly cannot be surpassed in whiteness, even by teasel. The tree is of rapid growth, and one of the finest of the maples for ornamental purposes. I notice all the seed dealers in New York have them on their lists. J. HASBROUCK.

Flatbush, L. I., Feb. 18, 1878.

Table Syrups.

The following is the full "Report of the Michigan State Board of Health," on a special investigation concerning impurities and adulturations in Table Syrups. At this time this Report will be read with special interest:

Many weeks ago a can of syrup was placed in my hands by Prof. Beal, which has the following history:

A family by the name of Doty, of Hudson, Mich., purchased some syrup of a grocer in that village. The members of the family ate freely of the syrup, and were all made very sick by its use. They became alarmed and sent a can of the syrup to the Agricultural College for analysis, supposing it to contain poison.

Other families in the vicinity became so alarmed by the singular sickness in the Doty family that they returned their syrup to the grocer. The grocer had purchased the syrup from a very respectable wholesale dealer in Toledo, Ohio, who claimed to have bought it from the manufacturer for pure cane syrup.

The syrup was of a light yellowish-brown color, and looked like a very respectable syrup. It had a decidedly acid reaction with blue litmus paper, turned black when sulphide of ammonium was added to it, and gave a heavy precipitate with oxalate of ammonia. On analysis, I found that the body of the syrup was made of starch sugar (glucose) instead of cane sugar. The amount of foreign impurities will be given in the results of examination, being No. 9 in that series. The free sulphuric acid (oil of vitriol), the sulphate of iron (copperas) and sulpho-saccharate of lime were probably the cause of the sickness in the Doty family.

The results of the analysis of this syrup induced me to examine a number of table syrups to ascertain whether similar adulterations exist in other varieties of table syrups.

Dr Letheby, in his admirable work "On Food," states that the Anglo-Saxon population of England and America consume, annually, 41.4 lbs. of sugar per head; the Latin race, including the inhabitants of France, Italy, Spain, Belgium, Portugal and Switzerland consume 12.34 lbs. per head; the Teutonic race of the Zollverein, Austria, Holland, and Denmark consume 7.3 lbs. per head: while the poor of Russia, Poland, Turkey and Greece consume only 3.3 lbs. per head.

The Anglo-Saxons are pre-eminently a sugar-consuming race. There are few luxuries so prized by Americans, for whom the chief articles of table luxury have sugar as an important element. The large consumption of sugar is not confined to the wealthy, but is almost equally as common with those of limited means. To defraud the poor man of his sweet, is to cheat him out of the chief table comfort which his poverty can afford.

Before giving the results of my examination of table syrups, I will remind my readers of certain facts regarding sugar. There is a large class of substances included in the general term, *sugar*. Only two are of sufficient commercial importance to demand our attention at present. One is termed by the chemist, *sucrose*, and includes cane sugar, beet sugar, and maple sugar. These sugars are chemically identical, and possess the same amount of sweetening power. Sucrose exists in the sap of a great variety of plants, and has never been manufactured from any other material.

The second class is called *glucose* or grape sugar; the white lumps of sugar in raisans is glucose. This kind of sugar may be manufactured from other materials, *e. g.*: from starch, woody fibre, etc. While it is possible to make this kind of sugar out of old cotton and linen rags, paper, sawdust, &c., yet it is not profitable to do so, because of the time required to make the change and the dfficulty in purifying and decolorizing the sugar when it is made. But this sugar can be very rapidly and economically made out of starch, and the manufacture has been carried on in France for a long time, and seems to have been intrduced into this country.

The chemical composition of cane sugar differs from that of starch only by one molecule of water, while grape sugar differs from starch by two molecules of water. If we could chemically combine one molecule of water with one of starch, we could make cane sugar. Chemists have attempted this by boiling starch with dilute sulphuric acid, but they always overdo the matter, adding two molecules of water, thereby getting grape sugar instead of cane sugar. If chemistry shall ever enable us to readily and cheaply combine the one molecule of water with starch, then the millennium of the sugar lovers will have come, for a bushel of corn will then make about 25 lbs. of cane sugar.

But chemists have not yet solved this problem which taxes their ingenuity only to tantalize their endeavor.

But while chemists have been baffled in their attempts to convert starch into cane sugar, they have found it very easy to convert starch into grape sugar. I will briefly describe the process as given by Payen, because we shall then more fully comprehend the results reached in the examination of certain syrups.

The saccharification of the starch in France is carried on in large wooden vats, capable of holding 2,800 gallons. The contents of the vat may be heated by forcing in steam through a coiled steam pipe at the bottom. The steam pipe is perforated, to permit the steam to escape at many points into the contents of the vat. In France the steam pipe is made of lead; in this country I suspect they use iron pipes. When 2 tons of starch are to be converted into sugar, 32 bbls. of water and about 80 lbs. of sulphuric acid are placed in the vat, and the whole heated to 212° by forcing in steam. Two hundred lbs. of starch are then mixed with 22 gallons of water and stirred up, and 4 or 5 gallons of this mixture are run into the vat. The temperature is kept up to the boiling point all the while, and successive charges of starch are run in till the whole amount is converted into sugar.—The steam is then shut off, and chalk is added in a sufficient quantity to neutralize the sulphuric acid, but if too little chalk is used, free sulphuric acid will be left in the contents of the vat. The sparingly soluble sulphate of lime is formed, and much of it settles to the bottom of the liquid; the clear liquid is drawn off and evaporated by steam heat till the proper destiny of syrup is secured, or until it will crystalize on cooling and standing for several days, according as they seek to make syrup or sugar.

This brief description will assist us to understand why certain impurities are found in these starch-sugar syrups. If iron pipes are used to convey the steam for heating the contents of the vat, the sulphuric acic will attack and dissolve some of the iron, and thus sulphate of iron (copperas) will appear in the syrup. If too little chalk is used, free sulphuric acid will remain in the syrup. The chalk being carbonate of lime, its use will explain why lime may be found in large quantities in the syrup. As chalk is insoluble in water, and sulphate of lime is very sparingly soluble, many persons would suppose that little or no lime would remain in these syrups. But we must bear in mind that sugar itself acts the part of an acid with many substances.—Thus there are two well known salts formed by combination of lime and sugar; one containing one equivalent of lime to one of sugar, the other containing 3 equivalents of lime to one of sugar.

These sucrates of lime have lost, entirely, the sweet taste characteristic of sugar, and have a bitterish taste instead. Last spring some students at this College brought me a small quantity of a whitish, granular mass, which deposited from the maple syrup in "settling" to make maple sugar. The sugar boilers called it *sand*, as it is hard and gritty, insoluble in water, and destitute of any sweet taste. On analysis I found the material to be nearly pure sucrate of lime, containing in addition a small amount of phosphate of magnesia. Here was the natural formation of the sucrate of lime from the elements of plant food contained in the sap.

Not only will sugar thus combine with lime, oxide of lead, oxide of iron, &c., but it will associate with itself sulphuric acid, and form a compound acid which comports itself very differently from simple sulphuric acid. This sucro-sulphuric acid forms a pretty large class of salts which are soluble in water, but especially soluble in solutions of sugar. Reagents which will readily precipitate sulphuric acid and sulphates, *e. g.* chloride of barium, will not precipitate the sucro-sulphates.

Glucose has the same power as an acid substance as sucrose, forming a class of soluble glucosates. It will also associate with itself sulphuric acid, and form a class of gluco-sulphates. Undoubtedly, a large part of the lime found in these starch-sugar syrups exists in the form of gluco-sulphate of lime. The sparing solubility of sulphate of lime in water is no guarantee that these syrups will not contain a large amount, because it may exist in the form of the soluble gluco-sulphate of lime.

One evil connected with the presence of lime in syrups is the destruction of a portion of the sweetening power of the syrup. One part of lime will destroy more than six times its weight of sugar, so far as any sweetness is concerned; and the compound of lime and sugar is bitter.

In making my selections for examination, I obtained specimens only from those who are regarded first-class tradesmen. If syrups bought at such places are adulterated, we may well suppose that the inferior class of dealers will have no better articles. Some have said that, undoubtedly, poor people who trade at small groceries are swindled in these syrups, but that the respectable class of citizens who patronize first-class grocers need not apprehend any such imposition. I determined to follow up "the respectable citizen" and see what syrups he obtained of "first-class grocers." Part of the specimens were obtained near home, but the most from abroad. I have examined 17 specimens in all, with the general result that 2 were made of cane sugar and 15 of starch sugar or glucose.

SPECIFIC RESULTS OF EXAMINATION OF TABLE SYRUPS.

No. 1.—Pure cane sugar syrup.

No. 2.—Starch sugar syrup. Contains some sulphate of iron (copperas), and contains in each gallon 107.35 grains of lime.

No. 3.—The grocer called it "poor stuff." I have seldom seen an article that better sustained its recommendation. Made of starch sugar; contains plenty of copperas and 297 grains of lime in a gallon.

No. 4.—Nearly pure cane sugar syrup.

No. 5.—Starch sugar syrup. Contains copperas, and 100 grains of lime in a gallon.

Nos. 6, 7, 8.—All made of starch sugar.—Contain sulphate of iron and plenty of lime.

No. 9.—This is the specimen from Hudson which caused the sickness in the Doty family. A starch sugar syrup; contains in the gallon 71.83 grains of free sulphuric acid, 28 grains of sulphate of iron, and 363 grains of lime.

No. 10.—Contains starch sugar, copperas and lime—amount not estimated.

No. 11.—A starch sugar syrup. Contains in the gallon 141.9 grains free sulphuric acid, 25 grains sulphate of iron, and 724.83 grains of lime.

No. 12.—Contains starch sugar, seasoned with sulphate of iron and lime.

No. 13.—Starch sugar. Contains in the gallon 58.48 grains of sulphate of iron, 83.14 grains of free sulphuric acid, and 440.12 grains of lime.

No. 14.—Starch sugar.—Contains in a gallon 80 grains of free sulphuric acid, 38 grains of iron and 262.48 grains of lime.

Nos. 15, 16.—Contain starch sugar, sulphate of iron and lime.

No. 17.—Starch sugar, sulphate of iron, and 202.33 grains of lime.

A very important element in this discussion is the great disparity in sweetening power between cane sugar and starch sugar or glucose. One pound of cane sugar has the same sweetening power as 2½ pounds of glucose. In these starch-sugar syrups, the public is not only treated with compounds, loaded with foreign and injurious materials, but they are enormously cheated in the very thing they seek to buy, viz: the sweetness. Sugars and syrups are bought, not as articles of food solely, but entirely for *their sweetness*, and thus the buyer is largely defrauded out of the very thing for which alone he makes a purchase.

The thought of using such mixtures as a relish for our food is not very appetizing.—Some of these drips seem to be made up of about equal parts of fraud and dirt! A facetious friend has quoted, in this connection, the old saying, "A man must eat his peck of dirt before he dies." If any one feels uneasy lest he be defrauded of "his peck of dirt," let him eat a few gallons of No. 11, and he may rest on his laurels the balance of his days.

WHOSE FAULT?

The public will naturally ask, "Who is to blame that such disgusting and fraudulent mixtures are sold in the shops?" I do not think that the retail dealers are "sinners above all that dwell in" Michigan, in this respect. Most of them honestly suppose that they are selling a good article of cane sugar syrup, and are themselves surprised that so good-looking syrups can be sold at so low a price compared with that of sugar—a price often less than that of the dark colored and strong flavored molasses which remains from the manufacture of cane sugar. The manufacturers are chiefly to blame in this matter, for they cannot be ignorant of the fraud in selling glucose for cane sugar; but even they will probably be surprised to learn how large a quantity of foreign materials is left in these syrups.

TESTS.

It is popularly supposed that an infusion of tea-leaves will certainly detect the presence of starch sugar, by the dark coloration which it imparts to the syrup. Strong tea will give a re-action of this kind with a salt of iron—the same re-action which makes black ink; hence strong tea may be used to detect the presence of copperas in syrup; but it will give no re-action with grape sugar containing no iron.

In most of these syrups, lime is the largest adulterant aside from the starch sugar itself. Lime may easily be recognized in the syrup by a solution of oxalic acid. Dissolve 1 ounce of oxalic acid in a pint of rain water; if the solution is not clear, let it stand for a few hours till it settles, then pour off the clear solution into a clean bottle and label it OXALIC ACID.—POISON. To test the syrup, place a tablespoonful in a tumbler half full of rain water, stir it up, and add a tablespoonful of the oxalic acid solution. If there is much lime in the syrup it will show itself by a white precipitate, the amount of which will give some measure of the amount of lime present.

R. C. KEDZIE.

AGRICULTURAL COLLEGE,
Lansing, June 30, 1874.

For the American Bee Journal.

Creating a Honey Market.

Dear Editor:—The February number of your valuable Journal is at hand. On page 41, I notice an article by friend R. M. Argo, of Lowell, Ky., about various matters, in which the first sub-heading is:—"Honey Market."

To create a larger demand for honey, I think it would be a good plan, if you would collect some recipes, like that of making jellies, etc. with honey, which is, for a good many purposes, superior to sugar; print them, with some articles about its superiority and healthfulness over sugar, syrup and molasses, in pamphlet form. I think every bee-keeper could afford to buy liberal quantities and distribute them among the people in their vicinity. This, no doubt, would help to create a larger demand for honey, as it would be read by a great many who do not read a newspaper. Will you try it?

Mr. Argo speaks very truly of an enemy to the bee-keeper, the "glutted market."—In my neighborhood, there are some farmers that keep from 5 to 20 colonies each, who raise from 1 to 300 lbs. of honey; they are anxious to dispose of it. They consider it a "big pile," and consequently offer it below the local market price, and that having been once reduced, people are not willing to pay more afterwards. If the larger apiarists will not sell their honey for the same price as these farmers do, they cannot sell any, as long as these farmers have any left for sale.

It does not come into their minds to subscribe for The Bee Journal, or buy any books treating on bee-culture. If there is any trouble among their bees, they frequently go to apiarists to inquire what to do with them, etc. Without such information, it would sometimes be costly to them.

Therefore, I think such a small pamphlet, as is above mentioned, were printed, with name of producer on it, it would be a great help to enlarge the demand for honey in the vicinity of every bee-keeper, and I, for one, would buy a good quantity of them.

I retail honey at home: Extracted, 12½c. per lb. Comb, (small lots, from 4 to 5 lbs.), for 20c. per lb.

Bees are doing well in the cellar. I put in, last fall, 159 colonies, in good condition. We have had an unusually mild winter here, and very little snow.

Fred Claussen.

Mishicott, Wis. Feb. 7, 1878.

[You are right, friend Claussen. A neat and attractive pamphlet, setting forth the various uses, both for food and medicine, of *pure honey*, as well as its general adaptation to the wants of the human family, would do much good, just now. No one can conceive how much it would help in *creating a demand* for that wonderfully nutritious, health-giving and soul-reviving produrt of nature!

Before the advent of sugars and many vile compounds, called "syrups," "silver drips," &c., honey was the only sweet in general use. And to-day it is the common article of food among many nations, especially among the Polanders, the Russians, and the inhabitants of the Orient. And it is a notorious fact that those nations, among whom the use of honey is general, excell all others in health, physical strength and endurance!

It is undeniable that *pure honey* is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted health and strength!

Knowing these facts, we *cannot* dodge the responsibility—and though we are much crowded with other duties, we will, at once, write the pamphlet requested by friend Claussen.

On another page may be found a prospectus, mapping out the line of thought to be pursued, and soon after this Journal is in the hands of subscribers, we hope to have the pamphlet ready to send to all who desire to co-operate in this most laudable enterprize of giving valuable information to their fellow men, and at the same time aid in creating an over-whelming demand for this wonderful product of nature—PURE HONEY.

To make its appearance inviting, we shall print it in plain, readable type, on fine book paper—for much valuable information is rendered useless, when poorly printed on inferior paper.

A sample copy will be sent post paid, for 10 cents. We shall supply them in lots of 100 or more at a very low rate, to encourage all to take hold of the enterprise. Without extra cost, we shall also print on the top of the cover-page "Presented by," &c. (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a fair and profitable price.

In lots of 100 we will send them, postpaid, for 5 cents each; in lots of 250 copies, at 4 cents each; in lots of 500 or 1000 copies at 3 cents each. When more than 100 copies are wanted they will be sent by express, at the expense of the purchaser.

We verily believe that one hundred copies of this pamphlet, judiciously distributed in every honey-producing locality, will forever annihilate the cry of "*glutted market.*" In its place will spring up the DEMAND—"Give us of your honey; ours is all gone!" And as the demand increases, the prices will increase correspondingly.

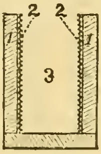
This is no idle dream, but a sober reality! If there be a general and thorough trial—the result is *certain!*—"Creating a demand" is *sure!!*

Presistent effort will accomplish wonders—united action will show results almost miraculous!—ED.]

For the American Bee Journal.

Comb Foundation.

I have made my comb foundations on a plaster of Paris model, made by running plaster into a mold with foundation on each side, thus:



No. 1.—Wooden box, size and shape for the mold of plaster. 12x12, 1½ inches thick, I think the best.

No. 2.—The foundation tacked on the sides of the box, for the plaster to run into and shape.

No. 3.—Plaster of Paris mold in position in the mold.

The foundation can be made at home, from scraps of wax; saving freight and toll. The foundations are 12 to 14 square feet to the pound, and are not all broken up, like those you buy, in transportation. It is a perfect *fac simile* of the copy, on one side of the machine foundation, and a faint copy on the other. It is so thin that you would not know it from natural comb, after the bees have worked it out. The same dip that gets the plain sheet for the machine furnishes this, only be careful to keep the plate well soaked and you can make about 10 lbs. an hour. The only draw-back is, that some bees do not make the cell as regular on one side as on the other.

Buchanan Co., Iowa. J. M. PRICE.

[The samples sent with this letter, we think, are too thick for use in surplus boxes, and though it might do, as suggested, to work up odd pieces of comb, we should much prefer to get the cells alike on both sides. It is an ingenious way of doing it,—the inventive genius is very commendable.—ED.]

For the American Bee Journal.

Transferring Bees.

I will give my plan, which I think an improvement on anything that I have seen in print:

Alarm the bees with a little smoke, reverse the hive under a tree, or near a fence; have a heavy blanket, I think a soldier's blanket best; fasten a ring, 10 or 12 inches in diameter, in the center, fasten a strap across the center to hang it up and to carry it by. It can be hung up to the limb of a tree, or to a pole or rail, with one end put across the fence. Drum a little and raise the blanket on one side. Split or pry off one side of the hive; cut out the comb; transfer to the frame, by using a transfer board, a little larger than the frame; fasten the comb in, by using an awl, if the combs are empty; but if heavy with honey and brood, tack a few strips of thin wood across the frame cornerwise; remove the strips when the bees have fastened the combs. Take hold of the strap of the blanket; carry the bees to the hive, placed where you want it to stand; let the blanket down; raise one side; turn it upside down; the bees will then crawl into the hive.

Let any one having bees to transfer, try this plan, and they will not want to try any other.

I have transferred hundreds of swarms and dispensed with the drum box altogether; the blanket adjusts itself to any size of box or gum. G. W. ZIMMERMAN.

Napoleon, O., March 12, 1878.

For the American Bee Journal.

Humbugs and Swindles

This is the heading of an article in *Gleanings* for February, in which the editor states that Mitchell and his agents are obtaining money by fraudulent claims; that Mitchell is the ring-leader of swindlers, &c.

What I want to know is: Where the humbug comes in? Those who have followed Mr. Root for years, know that he commenced with the Langstroth hive; then after the "Common-sense Hive" was patented, he used the principal features of it in his "Simplicity." When Mr. Mitchell got his patent on the "Adjustable Hive," he appropriated the cloth-end division boards, and then called Mitchell a humbug. Is this following the "golden rule"—doing to others as he would that they should do to him?

Now let us see if Mr. Mitchell is humbugging the public. He charges $10 for a right to make and use his hive. The materials cost but 50c.; his agents sell them, complete, for $1.25.

If a man has 100 colonies, the account would stand thus: Right, $10. Hives, $125.00. Total, 135.00. Mr. Root sells the Langstroth hive complete for $3.75; the Simplicity, for $5.00. Take the cheapest:—100 at $3.75 would cost $375.00. Now deduct the price Mitchell's cost $135.00. The balance, $240.00 is in favor of Mitchell and against Root.

Is it not better to pay for a right for using a good hive, than to get a non-patented one that costs three times as much? I like to see fair play.

I transferred 100 colonies last season to the Mitchell hive, and have not lost one; my bees are now stronger than when I put them into winter quarters; they have been breeding all winter. C. EGGLESTON.

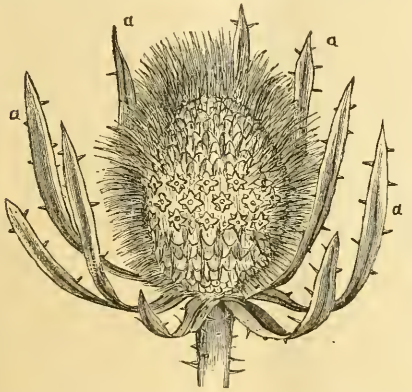
Macon City, Mo., Feb. 19, 1878.

For the American Bee Journal.

All about Teasel.

Teasel is sown about May 1st in continuous rows, 3 ft. apart, and thinned down to about 10 inches apart in the row. Alternate rows are planted to corn, or turnips may be sown between the rows. Teasel leaves lay almost flat on the ground; it is therefore difficult to cultivate it. Clay and gravel soil is best for it, when highly cultivated.—Light soils should be avoided, as it is liable to winter-kill.

The following year (May 1st) it should be hoed; each plant will soon throw out a stalk 4 ft. high, and from every joint, or leaf, other stalks will grow, attaining similar height. At the extremity of each stalk, or branch, are buds which are called teasels, varying in size from 1 to 4 inches in length, and one-half the length in diameter. One root often produces 20 or more of these buds. The first to bloom are the largest; they are termed 1st, 2nd, and 3rd, according size.



[This excellent cut is from Prof. Cook's New Manual of the Apiary, and shows the Teasel bloom.—ED.]

They bloom about July 5th, and continue out 4 weeks. Each bud (teasel) blossoms profusely, beginning first in the center of the bud, the flower being similar to red clover.

After the bloom ceases, the teasels should be cut. The bloom on the 1st ceases in about 2 weeks; on the 2nd, 5 days after; and so on.

They are dried (or cured) by laying them on a lattice-work floor, in a loose-sided building. A good crop will cut about 300,000 teasels; they are worth 40c per 1000.—(10 ℔s. to a 1000).

Its honey-producing qualities are equal to basswood—and when the latter fails us (as it did last season) the teasel yields profusely.

The flavor of teasel honey is excellent; it it transparent and white, correspondents in the Dec. and Jan. Nos. to the contrary, notwithstanding. One of these asserts that teasel produces two kinds of honey. Such an idea is preposterous! If such were a fact, would the two car-loads of *white* teasel honey shipped to Thurber & Co. last fall have been so admired? My whole crop of white honey was gathered from the teasel.

Teasel produces no pollen, but bees will be nearly covered with a white substance, like flour, while working upon it. By this I know that my bees gathered their white honey from teasel.

Teasel is one of the greatest honey-producing plants in existence, and it will pay to cultivate it for that purpose.

Marcellus, N. Y. N. N. BETSINGER.

For the American Bee Journal.

How to become Successful.

In order to become a successful apiarist, three things are absolutely necessary:

1. A location abounding with honey-producing plants, of the different varieties, both early and late. For early—such as willow, elm, soft maple, cherry, plum, apple, currant, gooseberry, raspberry, &c.

For summer—white clover, basswood, mustard, cucumber, squash, poplar, pumpkin, &c.

For fall—buckwheat, golden rod, wild sun-flower, and all the various varieties of flowers that bloom in August and September.—thus keeping one continual flow of the saccharine juices of nature's laboratory, from early spring until the icy hand of winter prepares all nature for her long slumber.

2. A good hive; not such as our fathers used; (the old log gum, nail-keg, round straw cap, &c. &c.) but a hive that permits every comb to be taken out and examined, and all necessary operations performed without killing a single bee, or exciting their anger. It should afford suitable protection against extremes of heat and cold, sudden temperature and the injurious effects of dampness. It should be capable of being adjusted to the wants of either large or small colonies; to allow the combs to be removed without any jarring; and to furnish all needful security against the ravages of the bee moth. The bottom board should be permanently attached to the hive, for convenience in moving it and to prevent the depredation of moths and worms; and it should enable the apiarist, who relies on natural swarming, and wishes to multiply his colonies as fast as possible, to make vigorous stocks of all his small after-swarms. Such swarms contain young queens, and if they can be judiciously strengthened, usually make the best stock hives.

In order to become a successful apiarist, it is necessary that he should understand the internal economy of the bee-hive, to some degree at least, and unless he is in possession of such knowledge, (he may be in possession of the best hive in the world, and be placed in the best locality that the country affords,) he will be almost absolutely certain to make a failure.

I know a man that has 200 colonies of bees, and his average amount of surplus honey per hive will not fall short of 80 ℔s. He is the right man in the right place, and has the right bees in the right hive. With him, it is bees first, and recreation and hunting afterwards. Such a man will succeed in a greater or less degree in any locality where fortune may place him in.

The enemies of bees are: Toads, spiders, woodpeckers, king birds or bee martins, as some call them, the moth miller, and man. But the moth miller is the most destructive, if we except man.

Think of the colonies so arranged in the apiary that the young queens fail to enter the right hive, and thus are lost, while the stock has no means of raising another; thus becoming a sure prey to the moth miller or to be robbed by other bees; and if not robbed, the whole inside of the hive becomes one solid mat of webb and worms; and after all, the whole damage lies at the door of the self-styled bee-keeper; with a little knowledge on his part, nine-tenths of the damage might have been averted.—Look at the increased destruction of bees for the past few years, brought about by the construction of clap-trap hives, by those utterly ignorant of the first principles of a good hive! Some moth nurseries; some smothering pits, during the winter!

Is it, then, any wonder that man should be called the greatest enemy of the bee?

Andalusia, Ill. C. HOTCHKISS.

Our Letter Box.

Millersville, Ill., Feb. 10, 1878.

"I have 50 colonies of Italians, and I have taken from them 4,500 ℔s., actual weight, being an average of 90 ℔s. to the hive; all sold at an average of 12½ cts. per ℔."

J. E. WALCHER.

Abronia, Mich., March 8, 1878.

"Bees have gathered honey and pollen all day. I never knew bees to get honey so early, before, in Michigan. They seem in fine order." T. F. BINGHAM.

Owosso, Mich., Feb. 25, 1878.

"The cause of ¾ths of the deaths of bees in winter, is that their honey is volatile, and gathers water; the bees being compelled to eat so much water with their honey, it physics them, and as it extends them so much, they cannot contain it, and die—often coming out of the hive in the coldest weather to die, rather than to stay in the hive and pollute it. REMEDY.—Throw out all the uncapped honey at the beginning of winter, and let them have honey that is sealed up, to live on. That gathers but little water. Poor honey may be given them in the spring." M. RICHARDSON.

Glenwood, Ill., Feb. 14, 1878.

"I put 102 swarms into the cellar, about Jan. 1; 14 are in box hives, the rest in Quinby frame hives. The box hives are inverted; the frame hives are right side up, on the bottom boards, with the entrance at bottom open. The 3 spaces in the honey boards are open. They are so arranged that dead bees can be swept out. The cellar is 16x24 feet, and is under the kitchen; it has an outside entrance, double doors, with chimney from the bottom. I put in a stove but had no occasion to use it, since the first few days after putting in. I warmed them up well then, to dry the hives.—The weather had been very wet for some time before, but it was cold when I put them in; the boards of the hives were full of frost. They seem to be doing well. The extractor you selected for me, last summer, works well, also smoker." C. L. FROST.

Garland, Pa., Feb. 11, 1878.

"Bees did very little here in the line of surplus honey, the past season; those that were well housed came out in the spring strong and healthy; swarmed early, and did well till the first of July, then wet weather began and they gathered no more clover or raspberry honey. The chestnut and basswood failed to yield honey, although they bore heavy bloom, and the weather was fine. Buckwheat and fall flowers yielded abundantly; in consequence, some hives were crowded in the brood chamber, and went into winter quarters with lighter swarms than we like to winter; but up to date, they appear to be in as fine condition as one could wish. For want of room in the bee house, we are wintering 14 swarms on their summer stands, packed in chaff.—The first we have tried in chaff, since the fall of 1867; that fall, we packed nearly all our bees in chaff. All that were so prepared came out in the spring in good condition.—We built a house the following season, and have wintered in that since then, with the exception of few swarms that have stood out every winter, with the caps filled with straw as their only protection, and have lost very few bees, excepting in the winters of 1874-5; (then we lost one-half; we wintered in). I think the old-bee theory correct, with regard to the mortality among our bees and those of our neighbors, that died the same winter. I took the trouble to examine the hives in 15 different apiaries, where the loss was from one-fourth to all they contained; and, in every case, found little or no pollen and no signs of brood, and came to the conclusion that it was for the want of young bees to supply the place of old ones, that caused them to dwindle down and die out so rapidly."

JNO. F. EGGLESTON.

Charles City, Iowa, Jan. 22, 1878.

"Last summer we had a good crop of honey from basswood and white clover.—The spring was wet and a late frost injured the fruit blossoms, and a drought cut the fall crop short, but our honey was all thick and of good quality. On May 1st, I had 14 colonies. I doubled my number and averaged nearly 50 ℔s. per colony, of comb honey, in 2½ ℔. sections. I have no extractor; my bees are mostly Italians. My Italians have always done the best. One new swarm filled a large hive, and made 90 ℔s. in sections, on top. Another old stock (with a dollar queen, bought of J. H. Nellis, in the fall of 1876,) made 113 ℔s. of surplus, in sections, tiered up, on top. I bought 6 more colonies last fall; making 34 now in the cellar, with the caps and top boards all off and chaff mattresses 4 inches thick over them. The explanation, in *Gleanings*, last summer, of how to make square-edged mattresses, by sewing up only one piece of cloth and tucking in the corners, and stitch before they are turned, is well worth the price of one year's subscription. We have a very warm winter. Some days in December the thermometer stood at 68° out of doors. I put a load of ice in the cellar to keep my bees still. I have made a new smoker that beats them all. I have thrown mine down, and let it lie for 3 hours and picked it up and it was ready for business, without re-lighting." L. SUTLIFF.

Fremont Co., Iowa, Feb. 8., 1878.

"I have just finished reading the JOURNAL, and am highly pleased with it. In the fall of 1876 I went to California and remained there 9 months. California was over-done in the bee business, up to last year, when the drouth played sad havoc with bees.—The Los Angeles and San Gabriel mountains, or the orange and white sage districts produce good honey, while the bay country is so affected with tar weed, that the honey is almost worthless for food. I went into winter quarters in the fall of 1876, with nearly 80 colonies. Went west and remained till July 3, 1877; when I came home, I found over ⅛ of my bees dead, there being hardly a strong colony in the yard. Basswood started all to strengthening up, so by the time heart's-ease bloomed, all were strong again. When basswood bloomed, I had 46 colonies; increased 2, making 48 in all. I extracted 5,500 lbs. of honey, and my bees went into winter quarters strong in bees and stores. I am wintering out of doors, with packings of straw. I have sold nearly all my honey to farmers, at 12½ cts. per lb. The weather has been excellent for wintering out of doors, excepting their having drawn largely on stores, but I think they will be strong in spring." W. MORRIS.

Wenham, Mass., March 11, 1878.

"Bees never wintered as well as during the past winter. All my colonies have come out nice and strong. The weather the past week has been like May. My bees, on the 10th of March, commenced to carry in pollen. I have been a bee-keeper upwards of 20 years, and never knew them to carry it in so early. Some 15 years ago, they commenced on March 16 to carry it in; but, as a general thing, they cannot do much at it earlier than about April 10. You did not understand me correctly about sending queens by mail. I have for the past 6 or 7 years paid letter postage on all packages containing queens, and have had no trouble. I do not ship them as my friend Cameron, of Kansas, suggests. We sent 1 package, containing 5 queens, to Canada, last year.—The postage fell short 3 cts., and it was returned with the words "*not mailable*" marked on it. They were re-packed, full letter postage paid, and they went all right." H. ALLEY.

Napoleon, O., March 14, 1878.

"Bees have wintered well in this section. I wintered without loss. They are strong and well." G. W. ZIMMERMAN.

St. Hilaire, Quebec, March 12, 1878.

"On Dec. 1, I put 60 colonies in the cellar. The thermometer has ranged from 50 to 55° all winter. As the weather has become unusually warm at this time of year, I now throw a few shovels full of snow, every other day, under my hives, to keep them quiet. Not one of them exhibits any signs of uncomfortableness. Spring, in the Province of Quebec, seems to come fully one month earlier than usual." THOS. VALIQUET.

Edgerton, Kansas, March 8, 1878.

"Our bees are in the best condition that they ever were at this season of the year.—They have been gathering pollen for over a week, filling up with brood quite rapidly.—The buds are bursting, grass is starting, and everything indicate a very early spring." A. B. DILLE.

Plymouth, Wis.. Feb. 16, 1878.

"Last season was a very fair one with us. Had 2,900 lbs. of honey; 1,940 lbs. of which was comb-honey and 962 lbs. extracted; and such a season for swarming! May I never experience the like again. I used every measure that is known to science to prevent increase, but all to no purpose. It is needless to state that I have lost the conceit which I entertained, of being able to prevent swarming under *all* circumstances. I think the black bees were as much disposed to swarm as the Italians. I am wintering 98 colonies; a few which I fed late in the fall, have dysentery and will probably die before spring. Well, this serves me right; for I neglected to supply the proper conditions. which I knew to be necessary to insure safety. The sample Case and Boxes came safely. Shall adopt them this season; only, I find that I shall have to make the top and bottom 6 inches long. Winter is too warm for this latitude. Thermometer stood at 42° at noon to-day." J. N. MCCOLM.

Chicago, Feb. 23, 1878.

"EDITOR JOURNAL:—In your article headed 'Honey Adulteration,' in the February No. of your JOURNAL, you suggest that the labels on the jars containing the adulterated honey, condemned in Glasgow, Scotland, may have been counterfeited.—Your readers would naturally infer that they were counterfeited or used by some other dealer in, and packer of honey. As C. O. Perrine is, and has been for years the most prominent in this line, I desire to state, as his Manager for a long time, and fully knowing to all honey and other goods packed and shipped in America and abroad, for the past 3 years, that I never saw or knew of a single counterfeit label put upon a jar of honey in this house. In this connection, I will add that we have been shipping honey to Europe for 3 or 4 years, and we have not had a single complaint; but, on the contrary, have received the highest praise for quality of goods, style of packages and safe packing. The only objection to repacked honey was the candying of it, which is the best evidence of its purity, and one party (a late shipment) refused to pay a sight draft, with invoice and bill of lading, as he wanted to see the honey before paying. After its arrival he desired further time to have it analyzed, which we suppose was done, as some weeks intervened before we finally received our money. We have had orders for car-loads of our re-packed honey; 500 cases at a time, which we could not fill, as we were unable to get the quantity of honey to fill the orders; and this is just what has forced Mr. Perrine to start an apiary, to get such honey as his customers desire, and in large quantities, and to be able to sell it at the lowest prices. If suggestions are in order, *perhaps* one of the parties spoken of in said article did not commence using the $1000 *reward labels* until after the exposure of adulterated re-packed honey."

W. W. HILTON, *Manager.*

Rome, Ga., March 12, 1878.

"Bees have had a fine time nearly all winter. We have had only a few days they could not be seen carrying in pollen, and to-day, many hives have a plenty of brood and drones. The peach and plum trees are in bloom. The weather being warm, it affords the bees a rich harvest. We have Italian swarms at work in boxes, 2 weeks ahead of the natives. I shall look for swarms by the 25th of this month."

A. F. MOON.

Lake Mills, Wis., March 8, 1878.

"Bees all out-doors; kept them in cellar first part of winter; then moved them out on summer stands and packed buckwheat straw around them; all are doing finely—flying and carrying in pollen. Bees out-doors are doing the best this winter."

O. L. RAY.

Berkshire, N. Y., Jan. 10, 1878.

"I have 49 colonies to commence operations with. I wish to get 1 good early swarm from each parent stock, and then stop all after-swarming, and get *every pound* of honey they will produce without robbing them or losing any swarms. How shall I do it?

W. C. LEONARD.

Bloomfield. Iowa, March 11th, 1878.

"Bees wintered well on summer stands here. I had 32 stands last fall and got them all through without the loss of one. They carried in the first pollen on the 6th, inst."

D. M. DEUPREE.

Kalamazoo, Mich., March 15, 1878.

"Bees doing finely; have lost but 1 colony, out of 137, so far; they carried in pollen lively on the 8th, 9th, and 10th; the earliest ever known in this section."

W. B. SOUTHARD.

San Luis Bay, Cal., March 12, 1878.

"Honey prospects fair, for this year.—The season is 5 or 6 weeks late. Have had over 16 inches of rain, but no floods in the *Bee-end* of the state. Crops of all kinds promise to be abundant. Chalmers Scott is my nearest neighbor on the west. He does not keep bees—never did; don't know anything about them, and is no authority for anything in the bee business. Swarming does not begin, generally, before April 15."

G. F. MERRIAM.

Easton, Pa., March 20, 1878.

"The JOURNALS came in due time. To say that I am pleased with their general 'get up.' will hardly express my appreciation of them. I see a decided improvement in them within a year, though I then thought it all that could be desired of a bee journal. If you keep on improving as you have done, the JOURNAL must become the *ne plus ultra* of bee literature, the world over."

O. W. SPEAR.

Monmouth, Ill., Feb. 18, 1878.

"J. H. Eldridge, Earlham Road, Norwich, England, in exchange for some seeds of the figwort (*serophularia nodosa*) sends me some 'furze' seed (*ulex europæus*), and describes it as follows: 'Furze is a perennial, almost leafless, dark green, spring bush, living very many years. (It was this plant which so astonished and delighted Linneus, when in England, by the beauty of a mass of its flowers. Many acres of our un-inclosed land are covered with it). In early June the bush is covered with bright yellow blossoms, and with, perhaps, the exception of August, there is not a month in the year when some blossoms may not be found on a full-grown bush. The bush grows 3 ft. high and round. It flourishes in almost any soil, except chalk. It will form a hedge, and, in England, grows in the most sandy soil and exposed places.' If any of your readers feel disposed to send me a stamp, I will send them 20 or 25 seeds. I have been thinking that it might prove both useful and ornamental to form division fences between lots, also to form a screen. Friend Eldridge says it is doubtful as to its being a great honey plant, but it affords an abundance of pollen. I would advise soaking the seed in water before planting. Sow in rows or a bed, and transplant the plants. It is a native of Europe. So is *serophularia*. The latter is anodyne, diuretic, tonic, dissentient, an anthelmiretic, and useful in scrofula."

T. G. MCGAW.

Hubbard, O., March 22, 1878.

"My bees have wintered well, excepting 2 colonies. One of them starved. and one queenless. I had 8 colonies in the cellar, and the others well packed on their summer stands. I now have 30. Last season, I sold $125 worth of honey, gave some to my three sons and their families. and used some at home. I had only 12 colonies that made my surplus."

J. WINFIELD.

Hamilton, Ont., March 14, 1878.

"FRIEND NEWMAN:—I suppose as I have not heard who sent from Canada the most subscribers for THE JOURNAL for last year, up to Aug. 15, it must have been myself; (I would like to know,) and if it was, I will exclude myself this year, and now renew the offer, viz: I will give a tested Queen to any one sending the most subscribers for the AMERICAN BEE JOURNAL from Canada before August 15, 1878; if they do not want my queens, I will give them an order on any good breeder in the United States."

W. G. WALTON.

[Friend Walton was entitled to the queen last season. Thanks for new offer.—ED.]

THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee Culture.

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◆

☞ R. R. Murphy reports three swarms on April 23d. Early work for Northern Illinois.

Editor's Table.

☞ It is pleasing to note that the demand for honey is increasing in several new channels. It is being used largely by brewers in making ale, and by tobacconists in preparing tobacco for the market. Its use for medicinal, culinary and other purposes is also increasing.

◆

☞ In answer to an inquiry, let us say that Cleome, or Rocky Mountain Bee Plant, will grow on any soil, and may be sowed at any time—May being the best time to sow it. It grows 6 to 7 feet high, and blooms from July till frost.

◆

☞ A sample of sugar made from honey is on our desk. As "the result of a first crude effort," it is a success, and shows conclusively that sugar can be made from honey and still preserve its pure and health-giving properties. We shall await the result of future experiments with much interest.

◆

☞ S. S. Weatherby, Balwin City, Kansas, has sent us a few of the blossoms of the Peach. There are from 20 to 30 petals to each blossom. Friend W. remarks:—"The tree in my yard, from which they were plucked, resembles a snow ball, so thick and white are the blossoms." What a rich treat for the bees !

◆

☞ R. Mayerhœffer, Esq., editor of the *Bienenvater*, Neustadt, Brit Gasse 744, Prague, Austria, desires us to say that he would like to exchange seeds of honey-producing plants for American, or he will sell seeds of European plants, 20 species for 70c. Payment may be made in currency or postage stamps. Here is a good opportunity for a friendly exchange.

Floating Apiary.

Mr. C. O. Perrine has started up the Mississippi River with his Floating Apiary. It contains 1000 colonies, and he intends following the honey bloom up the River, from lower Louisiana to St. Paul, a distance of 2,000 miles, which he expects to reach by the end of July. This he will do by "easy stages," remaining but a day or two at a landing, and move up each time to another landing and a fresh field. He thinks the bees of from 1,000 to 2,000 colonies will take the cream from the country around the landing from 1 to 2 miles distant, in 1 or 2 days. Returning, he will halt about two months somewhere above St. Louis, and will reach Louisiana with his bees in October. It will be his object to take the autumnal flowers at each point in their prime, precisely as he takes the spring flowers in his advance up the river. He expects his early swarms on his boats to increase his colonies to 2,000 in April and May. The following is a description of the whole outfit:

> The hives stand in four walls, five hives one above the other, nearly the whole length of the boat, about 250 hives in each line.
>
> The walls of colonies on the right side and left side have openings for the bees to come out on the water-front; a space of two feet between the hives and the guards answers for a gallery for the bee-man to walk on in front of the hives.
>
> In the middle of the boat there are two other walls of colonies, 250 hives in each, facing an inner court six feet in width. The bees from these colonies reach the open air through the sky-light opening in the roof above the court.
>
> Between the first and second rows of hives from the outside there is an aisle three feet in width, for the convenience of handling the hives and the honey.
>
> The distance from the barge deck to the roof over the colonies is fifteen feet. The space below the deck is ten feet in width and about seven feet high, and is to be used for sleeping apartments, making and repairing hives, handling and extracting honey, and putting it in marketable shape. The dining-room and cooking will be on the steamer that tows the bee fleet.
>
> To run the steamer and manage the barges and bees fifteen to twenty hands will be needed. The cost of the whole establishment, barges, bees, steamer, and the complete outfit, will not be much short of fifteen thousand dollars.

◆

☞ We expect an importation of Imported Italian Queens about the middle of May. Those desiring any from that shipment should send at once for them.

☞ By about the 15th of May we expect to be able to fill the many orders we now have waiting for Prof. Cook's new Manual of The Apiary. It has greatly overrun the intended dimensions of the work—making about 50 extra pages. It gives very full and explicit descriptions of the honey-producing Plants, Trees and Shrubs, as well as interesting details concerning the "Care and management of the Apiary," and the Natural History of the Honey Bee. A specimen page will be found in this issue, containing an engraving of the Tulip tree bloom. The illustrations throughout are magnificent, and the work is the best, as well as the cheapest that has ever yet been published on the Apiary. In consequence of the addition of one-fifth to the number of pages in the work, the price will be increased to $1.00 for it, when bound in paper covers, and $1.25 when bound in cloth with gilded back.

◆

☞ The Santa Barbara *Press* has revived the old story of a wonderful cave of honey, in the following language, which is now going the rounds of the Press. It appeared in a late *Prairie Farmer*, without comment, headed "A Monster Bee Hive." Here is the item:

> "In the second canyon west of the Mission creek is a huge rock almost perpendicular and standing about 150 feet high. The face is marked with three or four deep crevices, two of which stop at about 100 feet from the base. In these crevices bees have swarmed for years and have their nests. This monster hive was discovered some 19 years ago by some Mexicans and has never been disturbed. It is calculated that the rock must contain several tons of honey, but it is almost impossible to get at it."

What a pity that so many tons of honey should be "un-come-at-able"! It is a very fine story, but one entirely without foundation.

◆

Imported Cyprians.—We learn that C. W. & H. K. Blood have sent a messenger to the Island of Cyprus, who understands shipping bees, for the purpose of properly packing and provisioning an importation of small colonies, which they expect to receive at an early day. In order to cover expenses, we are informed that they will have to charge $30 each for them.

New Arrivals at Our Museum.

LANGSTROTH HIVES.

G. W. Zimmerman, of Napoleon, Ohio, has sent us a lithographic view of his apiary, which now adorns our walls, as requested. He also sent us one of his hives. It is a Langstroth hive, with a few modifications—and, of course, it is a good one.—Nearly every apiarist is adopting the Langstroth hive now—sometimes varying the dimensions, or some other unimportant feature. Friend Zimmerman gives us this description:

> "I have made and used these hives since 1868. What I claim as my improvements, are the frame, 10x14 inches; the hard strip of wood, upon which the frames hang, and the ventilator in the rear end of the hive, which slides on dowell pins. The lower story takes 10 frames; the upper, 11 frames, or sectional boxes. These I claim to be my improvements, unless it can be shown that they were used prior to the above date.—(The sectional frame or boxes were 4½x5 inches). I have tried many movable frame hives, during the 24 years that I have used these, but find that this one gives me better satisfaction than any other. I have had over 2500 of these hives manufactured here; there are now over 3000 hives here, containing these frames."

It is questionable whether friend Z's modifications *are* improvements. We certainly prefer the standard Langstroth hive, without them. Of course, other good apiarists may not—among them friend Z. We add it to our Museum with pleasure.

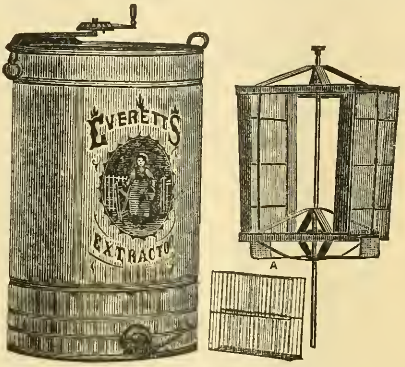
R. R. Murphy has also sent us a Langstroth hive with his modifications, a 6 ℔. honey box, and case to hold Prize Boxes for it, with tin separators. It is a regular two-story L. hive—only it has two-inch ends for the brood chamber. This adds a trifle to the cost, and it is questionable whether it is of sufficient value to pay for it. The 6 ℔. box is one of the "long, long ago" kind—good, but out of date now. The case and Prize Boxes are to be used on a honey board—as nearly all now dispense with the honey board, cases to be hung by a projecting top bar will be generally preferred.

THE MODEST HIVE.

J. Oatman & Sons have sent us the Modest hive. It contains 11 frames, (top bars not beveled), size, 11x12 outside; two cases, each containing 4 Prize Boxes; and a Comb Honey rack, holding 21 Prize Boxes, with tin Separators. The cap is made of ⅝ stuff, and is roof-shaped. Being *modest*, we prefer the Langstroth, though the former is a good and simple hive.

THE EVERETT HONEY EXTRACTOR.

This is a Novice Extractor improved, and has been endorsed by the Michigan and Ohio State Conventions—the only places where it has been exhibited. It gives valuable room, like the Muth Extractor, for considerable honey below the comb basket, and has an attachment for holding pieces of broken comb while extracting the honey, which hangs near the top of the comb basket, avoiding the disagreeable necessity of reaching down to the bottom to put in or remove them. It will take frames 12x20 inches or smaller. It is advertised in this issue, and may be had at this office.



THE THOMSON HONEY EXTRACTOR.

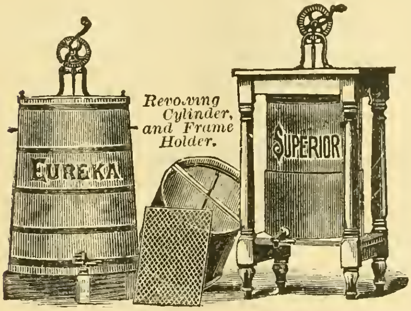
This consists of material (iron and wood) all fitted, to be put into a barrel, to extract the honey, and is all that the small price, $2.50, would lead one to expect. It is a bent rod, with handle and iron fittings, and the material for a comb holder. Any mechanic can easily put it together and fix it into a barrel. It is the *cheapest* thing in the extractor line, and leaves no excuse of any one not having an extractor, even if he has but one colony. It can be made for any frame—the size of the barrel being the only restraint. For sale at this office.

OLDT'S HIVING APPARATUS.

Another improvement and another model has arrived. This is intended to be used where queens' wings are not clipped. It has to be very nearly balanced when the hive is on, and after a few bees have swarmed out, it tips to the front, and the entrance is closed. The only available space for the bees is an enclosure covered with wire cloth. Into this they rush, and as they cannot get away, after becoming composed, it is intended that they shall enter the empty hive from the wire cage and go to work. Another feature is that it may be so arranged as to give alarm when the bees swarm by ringing a bell attached to the apparatus when it tips forward.

WHITE'S NEW HONEY EXTRACTOR.

Here are two new machines—the latest being the "Eureka." The revolving cylinder and comb holder, as seen between the two cuts, revolve within a well-made, hard wood tank. In the "Superior," the upper cylinder revolves, leaving the lower one stationary. Both have faucets and a capacity for holding 150 ℔s. of honey below the revolving cylinder; this runs through a strainer into it, and is, therefore, free from dead bees, dirt, &c., and is ready to bottle direct from the faucet. Both have tight covers, protecting from flies, bees, &c. They will take any frame not larger than 12x18 inches, and are very durable. For sale at this office.


Revolving Cylinder, and Frame Holder.
EUREKA
SUPERIOR

THOMSON'S INTER-CHANGEABLE HIVE.

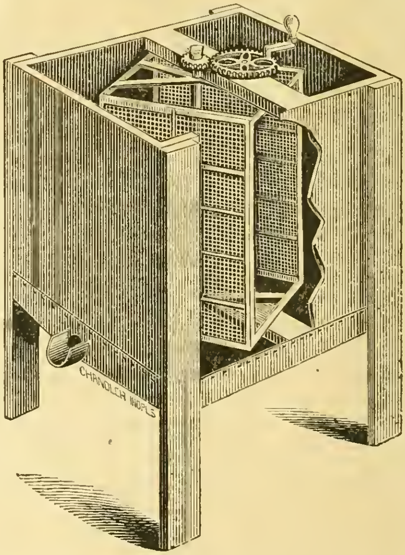
Wm. Thomson, Detroit, Mich, has sent us this hive, which he claims "is the best and cheapest two-story hive ever invented." It consists of 4 pieces of pine, 13½ inches wide, and each cut to about 15 inches long, rabbeted inside on top, to receive top bars 1½ inches, and rabbeted outside 1 inch at bottom. The upper story fitting closely into the rabbet of the lower, but leaving room for the top bars of the frames. The frames are 13 inches square and fit either way of the hive, that being square also.

This hive, friend Thomson thinks, "merits the $25 offered by Novice, in *Gleanings* for February." Novice differs with Mr. Thomson in his opinion, and as he guarded his offer by adding that the desired device must be one that he will adopt, he alone is the judge of "the fitness of things"—and that ends it. "And now comes" Novice, with "malice a forethought," and publishes Mr. Thomson as "a humbug and swindler." Though, if we were called upon to judge in the matter, we should not see our way clear to award the $25 to the "Inter-changeable" hive; still, we deem Novice's action extremely reprehensible. The hive is very simple, and, in a measure, answers the requirements Novice stated. Mr. T. thought the hive merited Novice's offered premium, and so stated—is he, therefore, a swindler? In the name of reason, tell us why?

Novice also condemns the AMERICAN BEE JOURNAL for publishing Mr. T's. advertisement of this hive—again exhibiting his jealousy and quarrelsomeness. Truly, Satan was editor-in-chief of *Gleanings* for May.

M'DOUGALL'S HONEY EXTRACTOR.

This extractor is gotten up with special reference to cheapness, and is intended for those who cannot afford one higher in price. It will take frames of any size, and as the inside parts are strongly made, it will answer the purpose as well as any. It has no cover or faucet, and the frame, though strongly made, is plain—the finish being where the expense has been saved.—It is a good machine for such a low price.—The revolving can may be easily removed and the whole readily cleaned. It takes any frame 13x18 or smaller. For sale at this office.

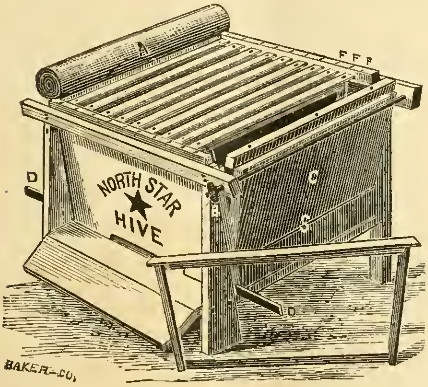


TRANSPORTATION CAN.

This is manufactured by J. H. Coleman, of New York, and is an excellent idea for a square can, holding from 1 to 10 gallons of extracted honey, enclosed in a box, so constructed that by lifting the cover the can may be placed in an elevated swinging position, and operated for pouring off the honey from the top so easily that a child could manage it.

THE NORTH STAR HIVE.

Sperry & Chandler have in this something of value. It is also a modification of the Langstroth hive, having many points of excellence. Its arrangement for the production of comb honey is, we think, unexcelled. Its peculiarities are a manipulating side (C) opening at the top about 2 inches; rod (B) with thumb-screw to hold the sides together; shape and size of frame, 10x16½ inches, tapering 2 inches; tipping front; easy means of controlling the entrance (D); the quilt to cover frames attached to the side, and its comb honey rack. We have some of them in use and like them exceedingly.



THE DUNHAM BEE FEEDER.

This Feeder is made of tin, the length of a Langstroth frame, 5 inches deep and 1⅜ inches in width. It is perforated at the bottom to let the food down, atmospheric pressure preventing its escape faster than it is taken by the bees. It hangs by projecting ends, like the top bar of a frame, and holds several pounds of the food, or it will work just as well when it contains a single pound. For feeding *inside* the hive, it is a good arrangement—though the idea of a feeder the size of a frame is old—still, Mrs. Dunham is entitled to credit for bringing it out with the present combination of parts. It can be made to fit any hive. The feeder may be removed as soon as the necessity for feeding is past, so that none is wasted, and as it is air tight, the food does not sour. It can be introduced as easily as a frame of capped honey, which has heretofore been considered the best method of spring feeding, thus avoiding the necessity of keeping such frames full of honey for that purpose. The food may be placed into the hive warm if desired. By request, we shall keep them on sale at our office. They can be sold for 75 cents each. Though feeders will not be used much this season, the time may come when they will be more urgently demanded.

HOGE'S NEW HONEY CARRIER.

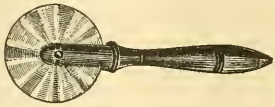
This is now made with spiral springs instead of rubber balls, and in it honey can be transported safely any distance.

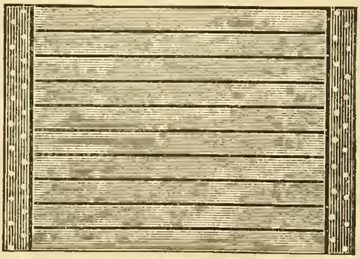
BEE BRUSH.

Geo. B. Wallace has sent us from San Bernardino, California, a brush made of the outside coating of soap plant, for brushing off the bees from the comb. He says: "by dipping it in water occasionally it will remove young Italians with despatch." It is placed on our museum shelves.

CARLIN'S FOUNDATION CUTTER.

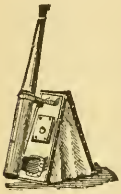
This is an admirable little tool for cutting comb foundation. The wheel is made of tin, sharpened. It is made by Novice, who has also constructed a frame for guaging the width of starters, to be cut evenly by it to any desired width. It is made of strips of wood of the desired width for starters, these being nailed together at the ends by a strip, and left sufficiently wide apart to let the Cutter work between them. These are both very desirable devices.



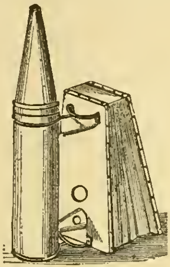


THE NEW QUINBY SMOKER.

Friend L. C. Root has forwarded us his new Smoker. Cuts of the old and the new, side by side, will show the radical changes that have been made. The bellows is shorter and wider, and has but 1¾ inches play—the old one having double that amount, making it difficult to operate. The tube is 2 inches in diameter, and is fastened to the bellows at both ends by cast iron holders. It is strong and durable—a vast improvement, in every way, over the old Quinby Smoker.



THE OLD.



THE NEW.

☞ One of the questions discussed at the Congress of French Workmen, recently held at Lyons, related to the means of widening the field of female labor. Among the avocations for which women are particularly adapted, bee culture was favorably spoken of.

☞ Novice is bilious, ill-natured, fretful and peevish—he sees everything through jealous eyes; and, sure enough, the world is wrong side up! In consequence, Satan has full possession of his sanctum—"type writer" and all! That "new light," which so lately illumined the place, has been extinguished by the arch-fiend, and in the "darkness and gloom," Novice is *furious!* Under dire hallucinations, and with a suddenness that is surprising, the *two* controlling the sanctum have declared war upon the American Bee Journal, and simultaneously have commenced hostilities!

The American Bee Journal, with "charity for all and malice towards none," extends its sympathy to the poor "fallen brother," and offers its strong hand to again lift him out of the grasp of Diabolus,—out of the mire, and gloom and darkness—into that "new light," which strengthens and cheers those under its influence!

The American Bee Journal takes up the "text prayer" of *Gleanings* for February—and asks the Father to "create" in him a "clean heart," and "renew a right spirit within" him—enabling him to say to the other occupant of his sanctum—"Get thee behind me, Satan!"

The National Convention for 1878.

The proceedings of the next National Convention will be made interesting by many important articles, among which will be the following:

Who will be our future honey producers?—By James Heddon.
Honey Plants of America.—By Prof. A. J. Cook.
Details of the Apiary.—By L. C. Root.
Honey as an Article of Food.—By T. G. Newman.
Rise and Progress of Bee Culture.—By A. J. King.
Should Inventors be Encouraged by Bee-keepers?—By C. R. Isham.
The Commercial Importance of Beeswax.—By Theo. Leonard.
Artificial Comb Foundation.—By N. N. Betsinger.
Fertilization in Confinement.—By Prof. Jared Hasbrouck.
Particulars Concerning Our Honey Markets.—By C. F. Muth.

Also interesting articles upon statistical information, regarding the production of Honey, by:

Prescott H. Woodford, of Hartford, Ct.
Wm. W. Cary, of Mass.
Geo. W. Rosenberger, of Va.
Rev. M. Mahin, of Ind.
Dr. J. P. H. Brown, of Ga.
J. M. Shuck, of Iowa.
Herbert A. Burch, of Mich.

In fact, the most elaborate arrangements have been undertaken to secure reliable statistics for publication.

Besides this, many interesting tests will be made in various apiaries this season, and reported at the meeting.

☞ Friend H. W. Conklin has sent us a small part of a frame, showing how he fastens in the comb foundation. A place for the foundation is sawed, as represented by the parallel lines, thus: ″′, the acute mark representing another saw cut by its side, and small brads are driven into the latter saw cut, and through the foundation—thus holding it, not only by the nails, but also by the pressure of the wood between the nails and it. It is simple, and very readily done by those having a circular saw; and about holding it in strongly, there can be no question.

Sending Queens by Mail—Progress.

Early in January we got up a Petition to Congress, and sent it to prominent bee-keepers in the different States, for the purpose of procuring signatures. By the first of March, having several thousands of names attached to the Petition, we sent copies to the Congressmen of several districts, requesting them to present the Petitions to Congress, and use their influence to secure the passage of a Law granting the prayer of the Petitioners. The following is a copy of the Petition :

To the Senate and house of Representatives of the United States of America in Congress assembled:

The Undersigned, citizens of the U. S., and residing in the State of......... would respectfully petition your Honorable Body to amend the Postal Laws, wherein they prohibit the transmission through the mails of "live animals" thereby forbidding the sending of Bees by mail, greatly to the inconvenience of your petitioners. Your petitioners hereby submit the following reasons for such amendment.

1. It is essential to the well-being and prosperity of colonies of Bees, that apiarists often exchange Queens, in order to prevent "in and in breeding," and obviate the consequent deterioration of stock, as well as to infuse new life into the apiary. Heretofore your petitioners have accomplished this by enclosing a Queen with a few Bees as "attendants upon her Royal Majesty" in a small wooden box, with one side covered with wire cloth strongly tacked to the box, and sending this neat and safe package by mail to brother apiarists in different States or Teritorries, as the occasion or fancy may require, without the least detriment to the mail bags, or inconvenience or injury to the person or any one connected with the mail service.

2. This reciprocal exchange of Queen Bees was inadvertantly interfered with by the passage of a late Act of Congress, forbidding the transmission of "live *animals*" through the mails. It is reasonable to infer that at that time no one thought that this Law would at all interfere with the transmission of these useful "*insects*" through the mails, when so harmlessly encased. Indeed, such transmission was *not* interfered with for a considerable time after the passage of the Law in question; and until a recent *Ruling* of the Postmaster General, the law prohibiting live *animals* from being sent in the mails was held as not applying to *insects*, and the mails were freely used by Bee-Keepers for sending Bees from one apiary to another.

3. The Bee-Keeping interests of the United States are large and they are yearly increasing and the recent *Ruling* of the Post Office Department is a great detriment to your petitioners and encroaches upon their rights and privileges as citizens of this great Republic.

Your petitioners therefore pray for a modification of the Postal Laws of the United States, so as to allow of the transmission through the mails of living Bees, when thus properly encased and protected.

And your petitioners will ever pray, &c.

The following letter from Hon. Geo. B. Loring, one of the members of Congress, to whom we sent the petitions, shows that we have accomplished something:

House of Representatives,
Washington, D. C., April 21, 1878.

My Dear Sir :—I have held a consultation with the P. O. Department, and find that in their view, House Bill, No. 3850, as now reported, is sufficiently liberal in its provisions to admit of discretion on the part of the P. M. General, in reference to the carriage in the mails, *when properly put up*, of matter now excluded. This will afford the relief you desire, I doubt not.

Truly yours, &c. Geo. B. Loring.

We hope our next issue will bear the news that the bill has been passed and that the P. M. General will revoke his order, and allow the free use of the mails for sending bees, as heretofore.

At all events it is pleasant to be able to report *progress*.

Marketing Honey.

This department will be devoted to items of interest concerning Packing, Selling and Shipping Honey and Beeswax.

The Honey Market.

This has been one of the most remarkable years the commercial world has ever experienced. Men, whose business sagacity has earned for them fortunes, and reputations for sound, penetrating judgement, have failed in their calculations for the past 10 months. We know of a merchant who purchased honey at a price he considered an extraordinary bargain, and basing his calculations upon the ruling prices of former years and the demands of his own trade, he was justified in his deductions.—But the general deterioration of all values shrank honey also, and his speculation turned out to be but another illustration of the truthfulness of what Robbie Burns tells us : "The best laid schemes o' mice and men gang aft a-gley."

Very little honey now remains on the New York Market. We are informed that the Thurbers have unloaded their large stock, having less than 100 cases left, which, considering their extensive trade, is simply less than a two week's supply !—Prices on "gilt edged," white honey, like that of Doolittle's and Ellwood's A brand, were maintained at 25 cents throughout the entire season. As well as one or two other producers, their cups of honey were sent to market in the neatest possible form, and they were well paid for the trouble! Not only did they have a care for neatness, but while packing the honey into crates, they avoided with scrupulous care anything that looked like deception; or, in other words, the "veneering" game, that so many practiced to their cost. In showing honey to grocers who buy single crates, they now, almost invariably, have the crate opened and examine every box, and if any are found off color, or in any way irregular in style or quality, the entire crate is rejected and has to be sold at a reduced price. It will be a great deal better for producers to cull the honey and grade it as it should be. We know how prone human nature is to ut the best foot forward, but it will not dop in cases of this kind.

Extracted honey, we are pleased to note, is just now attracting considerable attention, from the new interest invested in it by the recent satisfactory efforts of certain gentlemen to convert it into sugar, suitable for domestic and manufacturing purposes. We are free to hazard the opinion that if the production of extracted honey can be so much facilitated and cheapened as to make its cost approximate that of raw sugar, it will then be but a question of time, when refineries will spring up all over the country, for its conversion into sugar; until then, producers must content themselves with a fitful and uncertain market. An important question is about to arise, and that is, "Can honey be profitably produced, so as to compete with raw sugar?" If this be determined in the affirmative, then all fears of an "over production" will be forever dispelled.

Let us have a full and exhaustive discussion of the matter. It will have to be disposed of sometime; and we might as well face the music now.

* * *

Golden Rod Honey.—It will be interesting to friend Palmer and others, who produce this kind of honey, to know that one European establishment, after receiving a sample shipment of Golden Rod Honey, sent an order to New York for that kind of honey; at the same time intimating that the trade in it was likely to be large.

The Feast of the Passover.—This is the season our Jewish citizens celebrate the Feast of the Passover, one of their important religious ceremonies, on which occasion it is their custom to eat honey. They are very particular regarding its purity, and indifferent as to price. They are instructed by their Rabbies to buy only candied honey, as it is more likely to be pure than it is when liquid. The grocerymen buy it in barrels, and sell it out to peddlers, who in turn, pack it in new, clean, and bright packages. One singular thing about this trade is that they will accept only such honey as candies with a "grainy" appearance, rejecting as impure, and as they say, "mixed with flour," all other kinds. The magnitude of this line of consumption is not appreciated by most dealers. We have known a firm, this year, to clean the market of this particular kind of honey, accumulating upwards of 200 barrels and firkins, and unload the whole of it in a single week in April.

* * *

California Honey.—Commission men and producers in California have, we understand, perfected arrangements for consignments of large lots of honey to Chicago, St. Louis, Philadelphia, Pittsburgh, Cincinnati and Boston. They are afraid to try the New York market, we understand, because they fear the competition with Eastern honey will be so great. They consider New York the point to which the most of the honey produced in the East will be shipped. The Californians have taken a "new departure" in the way of surplus boxes. We saw some very neat Prize Boxes and Crates from there, last winter. Our Eastern friends will certainly have to look to their laurels. Comb honey must be put upon the market in attractive one-comb boxes, to find ready sale.

* * *

Every one who has traveled in Switzerland will recollect how plenty honey is throughout that country. At the hotels it is supplied *ad libitum* without extra charge as a part of the "plain breakfast" of rolls and coffee. In most parts of this country, on the other hand, it has been a comparatively costly luxury; but now there is reason to hope that it will soon be as abundant as in Switzerland. With the modern appliances discovered to direct these busy workers for man's benefit, bee-keeping is destined to develop a source of untold wealth to the country.—*Exch.*

SHIPPING AND MARKETING HONEY.—Packages should have gross and net weight *neatly* marked upon the cover or head.—The address of the firm to which the honey is shipped should be so marked on the cover or head, as to generally take up as little room as possible. Commission houses will generally forward a stencil-plate for this purpose, when requested to do so.—The initials of the party shipping, or his shipping mark, should be on the package as well. Of course, where large lots are shipped, simpler marks can be used, by an arrangement between the parties. Neatness in marking is *very* important. The shipper should strive to have his honey strike the eye of the buyer favorably at first sight. Receipts should always be taken from the express or transportation companies, and full advices, with a correct invoice of the shipment, should, without delay, be forwarded by mail. When forwarded by express, it is best to put a letter of advice in one of the packages, and mark plainly "bill," advising by mail. There is nothing so vexatious or intolerable to a commission house as the receipt of consignments not properly or distinctly marked and advised. Every producer who designs to make a market for his honey and obtain good prices, should have a brand or mark of his own. By doing so, he may establish a reputation for his goods which will be valuable to him; buyers will look for his particular brand.

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THE BOSTON HONEY MARKET.—There is quite a large stock of white clover and basswood honey remaining on hand unsold there. Dealers paid a high price for it, early in the season, last fall, and are not disposed to sell at a loss now; therefore, they expect to hold it over until next season. They do not seem to push it with the vigor they should, either. A friend of ours called upon a commission merchant, the other day, who, he knew, ought to have some nice honey; and, after looking around and failing to discover the article anywhere in sight, asked whether he had any honey for sale. He replied, "Yes, we have a lot up in the loft, it is a good deal of trouble to get it down, but if you want to buy, we will show it to you." He assured him that if he was not too much attached to it, and the price and quality suited, he would buy, and finally did negotiate the sale. The Geer brothers complain of slow sales, and say that they expect to draw off all their wagons the 1st of May. Cuba honey is offered and sold there at 80c. per gallon; it weighs about 11 lbs. to the gallon; even at this low price, the only buyers are New Yorkers.

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☞ J. H. Martin, of Hartford, N. Y., has sent us some of the little boxes in which he has been putting up his candied honey, as spoken of on page 107 of the April number. His boxes are round, and look like large pill boxes, and hold 2 oz., ¼ lb. and ½ lb. each respectively. They are neat and nice, and as they take well with the children—why is this not a good scheme? It comes very near to the "penny package" idea—and it is healthy for the children and profitable for the producer.

Our Letter Box.

Winterset, Iowa, April 15, 1878.

"In the winter of 1876-7 I had 10 colonies in the cellar and left 44 out without protection, and in June following I had only 3 left. I increased and purchased to 32; sold 22 of them and expect to increase to 50 this season, besides getting about 500 lbs. of honey."

M. BAILEY.

St. Clair Co., Ill., April 13, 1878.

"I would like to ask C. Eggleston if the season had not more to do with his success than the kind of hive he uses? My bees brought flour from a mill (60 rods distant.) before Christmas, and kept at it till others brought in natural pollen. I had brood hatching on Feb. 1. I have 23 colonies in Adair hives. Novice has not changed as much as Mitchell. The latter's changes have been many. In 1870 he had the Buckeye, with hinged frames opening like a book; in 1872 he had the 'Rough and Ready' hive, lined with paper, frames 11x12, tight-fitting at sides. With this he was going to 'beat the world.' Now he has the adjustable hive, with frames 12½x10⅝ deep. This makes 3 different hives in 8 years. In transferring, it makes no difference which way combs are put into the frames, as I have proved. I made the discovery in this way—one very warm day in September, 1875, I was extracting honey from the brood-chambers of several Adair hives and cracked several combs at the top, so that they would not bear their weight right side up, so I turned them top side down, intending to turn them as soon as the bees got them mended, but I missed one and left it in the hive till I was overhauling it the next spring, when I found it all nicely fixed up, straight and smooth, with more brood in it than in any other section in the chamber. I have since put combs in frames just as they fit best, and never have had any cut out yet. which Mitchell says they will do, in his 'First Lessons in Bee Culture.'"

C. T. SMITH.

New London, Minn., April 21, 1878.

"Bees commenced to gather pollen and some honey about the 1st of April, and also to rear some brood. They now have whole combs filled with pollen, and the queens are laying profusely. Every one of the 60 colonies are doing well. They are all in the North Star Hive. One that had been a choice queen for 2 years now proves to be only a drone layer. Apples and plums are just commencing to bloom."

O. W. Parker.

Jesuit's Bend, La., April 14, 1878.

"I use in my father's apiary, a bee smoker consisting of a roll of bagging about the size of the wrist and a foot and a half long, sewed up together. I make it of old oat and bran sacks—one cut in half will make two. By lighting the end of one of these you have a splendid smoker which never goes out and is very handy." Geo. E. R. Fox.

West Chester, Pa., April 12, 1878.

"Bees are swarming in this vicinity from the Centennial hive. A neighbor had a fine swarm thrown off, on the 2nd of April, and another on the 3rd. Then there was very little honey to be gathered. Now we have abundance of blossom,—the peach, plum and cherry; also Norway maples are giving considerable honey."

E. Penn Worrall.

Malden, Ill.

"I have handled bees more or less for the past 58 years. Formerly, we got them to do all we could, and then brimstoned them.—Last spring I had but 6 colonies, increased to 20 last fall, in fair condition for winter, besides having obtained over 300 lbs. of honey. After willows and maples bloomed, gooseberries came, giving considerable honey; then dandelions, apples and raspberries. In June white clover was good; the drouth came in the first week in July, lasting a month, during which the bees gathered no more than they consumed.—The bees visited buckwheat till about 9 A. M., then some went for the lady's-finger and heart's-ease till about 3 P. M. They were busy on melilot clover from morning till night, preferring it to the golden rod.—Buckwheat is good for honey. During the drouth bees visited catnip. I have learned more from the American Bee Journal as to how to handle bees than from all other sources, and wish it every success."

R. Corbett.

Otter Tail Co., Minn., April 15, 1878.

"Having had considerable experience with foul brood several years ago, I can say, with much confidence, that there is no danger in using hives which have contained foul brood if proper care is used in cleansing them. The process is simply to scrape the hives and frames and then scald them thoroughly with boiling water. I have removed bees and purified the hives in this way, and returned the bees to the hives the same day, repeatedly, without any recurrence of foul brood. The combs cannot be preserved without taking more time and labor than they are worth. But they need not be wholly destroyed. After cutting out and burning the parts containing the dead brood, the remaining portions of the combs may be melted into wax and the honey which they contained boiled and skimmed, and then used in any way which the owner desires, without danger." D. Burbank.

Appleton, Wis., April 21, 1878.

"Friend Newman: I have been appointed by the Commissioners of the National Bee-keepers' Association to make a statistical account and report of honey and wax production of our State for the year 1877. My advantages for gathering such information is so limited that I think best to secure the help of the Journal, requesting all who have information in their county, in this State, to send it to me before July 20th, giving names of bee-keepers and county, and the amount of honey and beeswax."

A. H. Hart.

[This table will be of value, and our friends in Wisconsin should respond promptly to friend Hart's request. It will be benefiting themselves in the end.—Ed.]

Limerick, Ill.. April 18, 1878.

"I saw on page 76, of the March No., that A. C. Balch had a swarm cluster out of reach and remained there till next morning. A friend of mine, when bees settle out of reach, takes a looking-glass and throws the bright rays of the sun on the lower edge of the cluster and gradually move it down; the bees come down too. I never tried it."

E. Pickup.

Flatbush, L. I., April 20, 1878.

"Dear Editor: Will you allow me, in your valuable Journal, to correct the report of my paper read before the Nat'l B. K. Association, in a part at which a gentleman feels aggrieved(?) I commended a bee-feeder, consisting of a small trough, without float, under the top-bar of a comb frame, but I said the device was patented. This statement was omitted in the report which, in its present form, the patentee thinks, does him injustice, and is calculated to mislead the public. I stated, however, that I believed the patent was not valid, as the same thing, in a slightly modified form, had been used by others for a long time, and, particularly, as I was informed by what I considered good authority, by the manufacturers of the State of Maine Bee-Hive. Will some of your readers, who know about that hive, tell us whether my information was correct, or who the proprietors or patentees of that hive were?"

Jared Hasbrouck.

Modesto, Cal., April 7, 1878.

"Bees are doing well. I expect to have sections filled in a day or two. I have mammoth stocks with a short shallow frame, 8x 13½, and hive 2 feet long. I take away all the empty space in the brood apartment that the queen does not occupy. I put my sections close up to the brood nest. When the bees are gathering freely, I lift them out partly filled and put them into the upper story." J. F. Flory.

Carson City, March 10, 1878.

"The season is 6 weeks earlier than any has been for 7 years. Bees are in good condition. They carried in pollen on the 7th inst. I use a frame 10x10 inches, and think it the best for this climate."

HIRAM ROOP.

Crystal Springs, Miss., March 9, 1878.

"I had in winter quarters 35 colonies. I have only lost 1; my bees are now raising brood rapidly, and gathering some honey.—I commenced with 13 colonies last year, reached 41, sold 6, and secured about 600 ℔s. of honey. Bingham's smoker is a success."

J. W. MCNEIL.

Lynnville, Iowa, March 18, 1878.

"Our 164 colonies, put up the last of Nov., came out the first of March with a loss of 2 per cent. 151 are in fine condition; as strong, if not stronger, than they were last June. With our bees in this condition, we feel confident that we shall reap a good harvest."

C. F. DILLEY.

St. Mary's, Ind., March 6, 1878.

"The AMERICAN BEE JOURNAL comes loaded with good things. Can't see how it is possible to make it so much better every month. It is always a welcome visitor.—My 10 colonies have wintered splendidly on their summer stands. Our winter has been the warmest ever known here."

THOS. J. WARD.

Platteville, Wis., March 11, 1878.

"My bees brought in pollen on the 7th inst., a month earlier than last year. My 68 colonies in the house apiary are in good condition. I have 32 more, 5 miles from the house apiary. My bees are all black. I have tried Italians 3 times and my faith in them is weak. In 1871, 58 colonies of Italians and blacks dwindled to 14 blacks; from these I have raised my present 100 colonies."

E. FRANCE.

Murfreesboro, Tenn.

LARVA EATING:—"In the March number, page 87 of the AMERICAN BEE JOURNAL, A. E. Manum, of Bristol, Vt., states that bees use their larva in making royal jelly—food for queen larva. Will Mr. Manum *please* inform your readers how he ascertained *this fact?* Did he make repeated experiments, so as to leave no doubt, or does he suppose, reckon, or guess they do?"

W. P. HENDERSON.

Columbia, Tenn., March 15, 1878.

"We are now having beautiful weather. The peach trees are in broom. The grass, the buds and the blossoms are coming rapidly, and the bees are having a good time; they are much excited and very busy. Out of 22 colonies I have lost 3—starved to death—through culpable neglect; and, if I were speaking of somebody else, I might say *criminal neglect.* The survivors are doing finely—raising young bees—some already hatched. The winter has been remarkably mild here, and the present indications are flattering for a good honey crop."

W. S. RAINEY.

Des Moines, Iowa, March 6, 1878.

"The double-walled hive with me, thus far, is a success. My bees came through the winter with nice, dry combs, free from mould, and are now increasing fast with brood."

WM. CLEMENT.

Dakota Co, Minn., March 11, 1878.

"From 10 colonies, last spring I got 600 ℔s. of extracted, 600 ℔s. of comb honey in section boxes, and increased to 18. I put them into the cellar Dec. 1, and they are all strong now."

E. W. FELTON.

Birmingham, O., March, 7, 1878.

"Bees are doing well, bringing in pollen from the elm. On Feb. 22, I found all but 1 colony in good condition, and in chaff hives found 3 frames with about 10 square inches of brood each."

C. A. GRAVES.

Fairfield, Wis., March 16, 1878.

"We took out our bees about the 1st of March. On the 6th and 7th they brought in pollen; almost a month earlier than usual. Bees have wintered well here."

WALLACE PORTER.

Nevada City, Cal., March 11, 1878.

"I saw a question in the JOURNAL enquiring whether bees would gnaw linen or cotton when placed over the frames. I have been feeding with sugar syrup, poured upon linen and placed over the frames, with the cover over that. The bees did not gnaw it at all."

R. E. BUSH.

Jones Co., Iowa, March 6, 1878.

"This has been a warm winter. I put 68 colonies in the cellar, Nov. 24. As it was so warm, I took them out several times, and lost none. All are on their summer stands now in good condition. I consider the JOURNAL the best bee publication—having read them all."

J. E. HUNTER.

Keokuk Co., Iowa, March 8, 1878.

"Took 109 colonies out of the cellar today in good condition. Have kept bees 7 years and never had them winter so well before. I winter in a well-ventilated cellar, and never lost but 3 swarms. One queenless, and 2 late swarms starved. Your 'typo' made our report nearly 2000 ℔s. of honey, instead of 4000 ℔s."

S. L. & M. VAIL.

Cedar Rapids, Iowa, March 11, 1878.

"I have 33 colonies of bees; lost none in wintering; they are in splendid condition; all have brood and bees hatching. Bees have been gathering polen quite rapidly the last few days. I wintered in the cellar. I have a foot-power saw for making hives and fixtures, and would say to any person keeping bees that they cannot afford to do without one. I agree with Mr. Palmer on the raspberry question, and think that bee-keeping and small fruit business should go together. I have 2½ acres of raspberries; they are always alive with bees, while in blossom. My honey took the two first premiums at the State fair last fall. Success to the AMERICAN BEE JOURNAL."

THOS. B. QUINLAN.

Shawano, Wis., March 16, 1878.

"I have 22 colonies in Langstroth hives, (8 frames,) made of straw, by myself. I have wintered out doors for 2 years without loss." H. Klosterman.

Garden Plain, Ill., March 12, 1878.

"My bees are out of house and are all alive and breeding rapidly—most of them have young bees, hatching—fully as fast as some years in May. If the season is favorable for the secretion of honey, I expect a large yield from my 100 colonies."

R. R. Murphy.

Waveland, Ind., March 16, 1878.

"I placed in the cellar last fall 44 colonies, and took out 40 this spring. Four lost their queens after being put out. I set them out the first week in March. Most of them had brood. Bees gather natural pollen every pleasant day, and, of course, pay little attention to flour feed. The prospect is good for all kinds of fruit, and an early honey season." Isaac Sharp.

Perry Co., Mo., Jan. 21, 1878.

"I commenced with 1 colony, in box hive, in 1863; I got a colony of Italians in a Langstroth hive in 1869, and subscribed for the American Bee Journal. Some of my neighbors, who keep a few bees in box hives, made fun of me at first, and predicted a failure—but now they don't seem so 'funny.' Last year was a good season for bees, while the two years previous were the worst I ever knew." M. H. Milster.

White Co., Ark., March 4, 1878.

"I commenced last spring with 2 colonies; these produced 85 lbs. of nice, white, comb honey each, which I sold at 18 cts. per lb. I paid $10 each for them. They were in movable, comb hives, but were black bees. In July I bought an Italian queen.—I introduced her into a hive; it was my first attempt at Italianizing. In September last, to my great joy, I found that I had a full colony of Italians. I bought, in June, 14 colonies of bees in common hives, and transferred them to movable-comb hives.—The 13 colonies are strong, and have plenty of honey. I saved, while transferring, about 100 lbs. of nice honey, which I have had for table use." D. I. Beecher.

Brecksville, O., March 18, 1878.

"Bees came through in splendid order—no loss whatever. Thanks to instructions in the old and reliable American Bee Journal. I put 25 colonies in the cellar, leaving the balance on summer stands, packed in chaff. After a careful examination of bees and stores, I am satisfied that those in the cellar wintered with the smallest loss of bees, and consumed from ¼ to ⅓ less honey, notwithstanding the winter has been one of extraordinary mildness. No further argument is needed, in my case, to show the *economy* of wintering in cellars, if proper conditions are observed. Very few losses in wintering have been reported in this vicinity, and unless the season should prove a very poor one, it is safe to predict a large yield from Northern Ohio the coming season." Chas. S. Burt.

Ridgeley, Mo., Feb. 22, 1878.

"My bees have wintered well—using but little honey. They are strong in numbers. I wintered on summer stands, packed in boxes, with hay." John Scheerer.

Milan, Ill., March 30, 1878.

"I have been 12 years in the bee business. Commenced with 1 swarm, and now have 112. Don't know anything yet about bees, but expect to learn somethimg from each copy of the Journal. My bees are in fine condition, and the prospects are first rate."

C. H. Dibbern.

Milledgeville, Ill., March 27, 1878.

"The Barnes' saw arrived on Saturday, in good condition. It ia a *good* saw. My bees are now on their summer stands.—They are in excellent condition. Did not lose a colony in wintering. I have received one of Novice's smokers. It is much inferior to Bingham's. The latter is the cheapest, and far more convenient."

F. A. Snell.

Riverton, Iowa, Feb. 8, 1878.

"Our great drawback, in the bee business, is that we have no bloom that affords honey in June. A great many bees, kept upon the old principle, died last June of starvation. I had 42 colonies; they cost me $1 per day for food. Our fall flow of honey was good. During the season of 1877 we had but little increase, but plenty of honey. About 10 tons in this county. I tried 3 dollar queens last season, and they were as good as any warranted ones I ever had, and I have paid as high as $8 for a queen."

Ed. Wellington.

Clarks, O., March 8, 1878.

"Bees have been gathering pollen and honey since March 1st. They are in good condition and breeding finely. Of 22 colonies, I have lost none; winter on summer stands. Some boys stole 3 frames, a few days ago, from a colony, taking about 15 lbs. of honey, the queen and about one half of the bees. I united what was left with another colony. I am using the adjustable bee-hive, and like it. We get our honey in section frames, and use the extractor. I shall try fertilization of queens in confinement, by a method I have long had in contemplation; will let you know how I succeed. Success to the American Bee Journal." J. A. Bucklew.

Marathon, N. Y., March 18, 1878.

"I like the American Bee Journal very much, and the better I become acquainted with its management, the more I prize it. Last Nov., I put 40 swarms of black bees in a house with a wall 8 inches thick, filled with sawdust on all sides, top and bottom; lined the walls with building paper on the inside, gave ventilation at top, and in center, at the bottom. Owing to the mild winter, it was hard to keep the temperature low enough to keep them quiet. I placed them on their summer stands the last of December for a flight, (the weather being warm); put them back dry and nice, where they remained until March. They are strong in numbers, and combs are bright, excepting a few. The weather continued warm, and in their eagerness to commence their season's work, they gave me trouble by robbing; and then there would be sneak-thieves, of my own or my neighbors, that would commence to fly about a strong swarm, and in a short time they would alight upon and enter in force. After protecting that one, they would go to the next one, but by close watching I managed to keep even with them until the weather cooled down. I have lost 2 out of the 40 colonies, owing to mismanagement last fall; they went into winter quarters with poor queens, or none at all. Please answer through your columns the following questions: 1. Will bees cluster and commence work in section boxes as readily, and with as good results where the division tins are used as they will when they are not? 2. Are section boxes with glass on either side preferred to them without glass, in the market? 3. Is tobacco smoke injurious to bees if used moderately while handling them?" OSCAR COURTNEY.

[1. Yes: just as readily.

2. They were last year — what may be demanded this year, is not yet determined. The Prize boxes may be glassed or not, as the market may demand, before shipping.

3. No; if used in moderation. Rag or punk smoke is better.—ED.]

East Pharsalia, N. Y., March 14, 1878.

"I started last spring with 3 swarms; increased, by artificial swarming, to 9, and took about 75 ℔s. of comb honey. I have now 9 strong colonies. Bees are busy at work on the sugar maple, where the farmers have tapped the trees. I use the Langstroth hive, and winter out of doors; made boxes 6 inches larger than the hives, every way, and packed space with chaff; they came out clean and bright this spring.—Have taken the chaff out, but will leave the hives in the boxes until about May 15. We have strong winds here through April and the first of May, and the boxes will keep the wind from blowing heat away from the hives. I intend to buy 5 more colonies, and then increase to 50. I experimented last year on comb foundation, and it was a perfect success; the bees accepted it, and drew out the cells quickly."

FRANK ROBINSON.

Oneida, Ill., Feb. 20, 1878.

"I believe I have made a valuable discovery; and that is to use wire cloth instead of canvas to pack absorbent around the frames in the hive; chaff, dry leaves, or saw-dust, may be used. Make a box 3 inches larger one way than the hive inside, and 2 frames high. To use the Langstroth frames, the hive should be 18⅜ inches by 21⅜, and 22 inches high. Make a frame of (common plastering lath) thin stuff, 1½ inches, to go into the hive; lath should be edgewise, with lath posts, about 6 inches apart; nail or tack the wire cloth on the inside of the frame, and pack the absorbent between the hive and the wire cloth. By this plan, the chaff is next to the bees. The chaff cover, made of wire cloth, will rest on the comb frames and be 3 or 4 inches thick. For hot weather, take out the absorbent, and the hive will be thoroughly ventilated. Take out the inside frame, and put the comb frames cross-wise and the hive will hold 8 more frames. We want more room in summer than winter; let the side of the comb frame run down ⅜, to rest on the bottom, and the top frame rest on the under one. I have kept bees 10 years; have set one hive over the other with comb frames, in the past 7 or 8 years, and like the plan first-rate." A. REYNOLDS.

Mount Pleasant, Iowa, March 13, 1878.

"Bees have wintered well. I have wintered 55 colonies on their summer stands, with the loss of but 1, which was queenless. My largest yield of extracted honey, last season, from 1 colony, was 394 ℔s., in a double-story, Quinby hive. Please answer the following questions in the next JOURNAL: 1. In using close-fitting, section frames, how can you tell when the inner frames are filled and ready to take off, without tearing them all up? 2. What holds the sections in place while on the hive? 3. Are the outside sections to be glassed? 4.—I intend using sections with close-fitting ends and ¼ inch top bar, covering the same with cloth; so by folding back the cloth, you can see down through, to know when they are filled. Is the idea a good one?"

JOHN. A. THOMAS.

[1. You can tell only upon examination, but that can be easily done without damage.

2, and 3. Answers to these will be found on page 156.

4. If you don't intend to glass them, your plan will do.—ED.]

Harrisville, Pa., March 16, 1878.

1. Is it best to hang the Prize Boxes in a case, or glass each outside one and fill the hive? 2. Are wooden separators as good as tin? They would be cheaper. 3. Is ¼ inch enough space for bees, as that appears to be all the room there is, with the separators?" JACOB PATTERSON.

[1. Either plan is good. See description in full on page 156.

2. Wooden separators have been tried, and abandoned by many. Bees will fasten comb to them, sometimes, and the capping will then be broken when removed.

3. The ¼ inch space between two boxes is supplemented by the thickness of the tin, giving them space enough to pass.—ED.]

Kewaskum, Wis., Feb. 12, 1878.

"The past season was a good one in this section. I had 20 colonies that made 4,300 ℔s., (an average of 225 ℔s. to the hive). I have sold all at from 10 to 12 cts. My neighbor, Mr. G. Kuck, had 2 colonies of Italians; one was so weak last spring that not more than a pint of bees was left; I took them in hand, and through May they increased very fast, and on the 1st of June one gave a large swarm. When the other swarmed I gave them an Italian queen, which was accepted, and in 10 days it gave another large swarm; the combs being well filled with brood. From the 2 colonies I made 11, and introduced Italian queens, which I sold him for $2 each. The account stands thus: Eleven swarms, at $5 each, and 550 ℔s. of honey, sold at 10 cts. per ℔.—Total, $110. The expenditures are: Eleven queens, at $2, and 11 hives, at $1.50 each, amounting to $38.50; leaving a net profit of $77.50." Wm. Hollom.

Hillsboro, Ill., March 20, 1878.

"Bees are out of winter quarters in good condition, with a shrinkage of not over 3 ℔s. since the first of December."

I. H. Shimer.

Mishicott, Wis., April 5, 1878.

"I put my bees out March 20th. Wintered them in the cellar; lost 2 colonies, and found a few queenless. The rest of them are in good condition. We expect a good harvest." Fred Claussen.

Garafraxa, Ont., March 11, 1878.

"My report for the last 2 years would be: In 1876, I put 18 colonies into a dark, but not dry cellar. Thermometer stood 40 to 42°; after 5 months' confinement, set out 16. In 1877, put 30 colonies into same cellar, on Nov. 7, and set out 30 on March 10. Thermometer at 42°, during all that time. Entrances open ½ inch and *new* sheets of duck over the frames. Water stood in the cellar during both winters. I have noticed that those colonies having the least pollen, had least moldy combs. Please get your readers to give more definite reports of their modes of wintering."

J. C. Thom, M. D.

[Yes; it would be more useful and satisfactory, if all would give the manner of their *preparation* for winter.—Ed.]

Smithsburg, Ind., Feb. 15, 1878.

"I wish some expert in bee-culture would explain why a queen, reared in Italy, will produce more eggs than one reared in America, and why they are better honey gatherers than the American bees, and why the dark bees reared in Italy will gather more honey than the yellow ones? And also why we never could get yellow queens from Italy before last season? Some say that their imported queens are very large and yellow, and also their workers; even more yellow than our home-bred Italian bees. I would like to see some of these beautiful, imported bees. I have had some imported queens that cost me almost $16 each. They were small and dark, as was also their progeny; and some of the queens were impure. If the yellow, imported queens are not the best, why does one of our dealers ask one dollar more for them?—He seems to think we should be satisfied with imported bees, whether pure or not.—I, for one, am not satisfied with any impure bees; I would not have them in my apiary. I have queens that will produce workers with the 3 yellow bands solid, with no black between them. These I call *pure* Italians." D. A. Pike.

Pontiac, Ill., March 20, 1878.

"The American Bee Journal has saved me, in clear money, $56.25 in the matter of hives alone, in two years, to say nothing of all the other information I have gained, which cannot be shown so readily by figures. Those who do not take the Journal stand in their own light."

R. Matthews.

"Albion, Iowa, March 14, 1878.

"My bees have wintered splendidly.—They became so restless that I had to remove them from their winter quarters on Feb. 11; found 1 dead—queenless. I made little increase in stock last year, but got a very satisfactory yield of honey. Being very busy with other business, last year, I concluded to let them attend to the swarming business themselves. This year, I propose to run the swarming business myself. Last spring, they came out of winter quarters with a fair supply of drones. As it is their custom to kill off their drones in the fall, why did they deviate from the general rule in this case? I see some writers on honey-producing plants class thoroughwort, or boneset as one of them. I have plenty of it, but have never seen a bee on it yet.—Are they not mistaken in confounding it with motherwort, which is a honey-producing plant? It is a prevalent theory among apiarists, that it takes about 20 ℔s. of honey to make one ℔. of comb; and therefore, that a colony of bees will make that many more pounds of honey in the same time, if they have the comb furnished them. In the first place, I would ask some one to explain to me by what experiment that fact (if it is one) has been ascertained? I have seen 2 colonies, of apparently equal strength, side by side, the one having a top box, of 15 ℔s. capacity, filled with empty comb, of last year's building; the other, with an empty one, throwing off a swarm; said swarm filling a 15 ℔. box, while the other had made no visible progress towards filling their empty comb. Why is this?—Or why, as a general rule, will a young, natural swarm fill its hive at the same time of making its comb, and make as much surplus honey in the season as the parent hive?" J. C. Armstrong.

[Will some one who has experimented as to the cost, in honey, of comb-building, give the desired information.—Ed.]

Forestville, N. Y., March 11, 1878.

"As I am thinking of building a winter repository for bees, I would like a little information concerning the construction of the same. Which is best, a cave, or a house above ground, with walls of 8 or 10 inches of saw-dust, and a 4 inch dead-air space?—Would it be best to plaster it? Is a gravel floor better than concrete? Please answer through the Journal?

I went into winter quarters with 12 colonies in Quinby hives; had them out for a fly, on March 8, 9, 10. One is dead, the rest are in good condition. I wintered in my cellar, which is too damp for successful wintering.

I see you go for the crystal honey business. A friend of mine obtained a recipe of one of J. H. Reeves, 78 Nassau St., N. Y., to make the celebrated crystal honey, paying $5 for it, which he (Reeves) claimed would make an article as much superior to bee honey as bee honey is superior to New Orleans molasses. My friend made some of it, and was badly humbugged. Could send you the recipe, if I thought it would be interesting." H. D. G.

[Either a cave or a house will usually winter safely, if properly prepared. A house, such as you mention, will do if the temperature be kept from 3 to 10 degrees above freezing point, and it is perfectly dark and well ventilated. These points are more important than plaster, concrete or gravel. A cave should be beneath the surface, in sandy, or well ventilated soil; straw should be packed below and around the hives; the entrance open, but secured against mice. A mound of earth should be over them, to secure equal temperature.—Ed.]

St. Charles, Mo., April 12, 1878.

"I have 100 Italian colonies in good condition. Never in 10 years have had such a favorable spring. Bee-keepers ought to be happy." A. S. Williams.

Vermont, Ill., April 11, 1878.

"My bees are now doing better than they did a month later last year. Drones are flying, and a small amount of honey is being gathered; brood in all stages of development. Could not do without the Journal." Hardin Haines.

"I enclose some blossoms of a tree that the bees work on from morning till night.—Please give its name." D. A. Pike.

[It is the staminate flower, of one of the willow family. Locality, time of bloom, and more of the plant than one simple blossom should be sent. We need to know the habit of the tree, and to see the leaves. —A. J. Cook.]

Smith's Grove, Ky., April 16, 1878.

"My bees are in good condition. I did not feed any this spring, and never had better success in springing my bees. They are now preparing to swarm. I am raising queens, and the white clover is just beginning to blossom. We are a month ahead of time. The weather is balmy, and our prospect is good for a rich honey harvest, though we may have a freeze yet. In Italianizing, we sometimes find it very troublesome to find the black queen, especially if the bees are strong. I have succeeded in Italianizing a few such colonies in this way:—I put a queen cell in the honey box, on the top of the hives, and it was a complete success. The young queen, being the most active, was victorious in the contest. The cell must be put in the honey box, where the old queen does not go, or she might destroy it." N. P. Allen.

McKinney, Texas, March 1, 1878.

"In the last January number, of the American Bee Journal, page 10, you answer a question, put by F. R. Davis, and the first sentence goes beyond the 'old school,' and. by implication, indorses the doctrine of Mr. Martin Metcalf, as set forth in your very excellent Journal, Nov. No., 1877, page 381. Did you intend to go so far? I have no doubt of the correctness of the doctrine of Mr. Metcalf, notwithstanding the learning of the great bee-men and the books. Please speak out, right in the meeting." W. H. Andrews.

[Certainly. Friend Davis had a swarm with an Italian queen, and hybrid bees, settle in his bee yard. The bees that this queen produced were all beautiful Italians. He asked: "Were they pure, when the queen came with a hybrid swarm?" We remarked: "If the queen was pure and purely mated, her progeny is pure, no matter in what company she may be. Most likely she had been recently introduced to the colony and led off the swarm." We see no reason for changing that opinion.—Being pure and purely mated, her progeny *must* be pure. Decidedly so.—Ed.]

Rockton, Ill., April 2, 1878.

"I put in my bee house 41 colonies, last fall, and took out 41 colonies this spring, in good shape, dry and nice, with lots of brood." H. W. Conklin.

Dunn Co., Wis., April 13, 1878.

"I have quite an amount of empty comb; how can I keep it from the moths?" J. Stoddard.

[Examine frequently, and if any traces of moth are discovered, fumigate them with a little sulphur.—Ed.]

Burlington, Kansas, April 5, 1878.

"I have wintered 13 colonies, 9 of them I transferred from box hives, during the winter, with success. All are now in fine condition. Gathered first pollen, Feb. 5, and to-day, I have drones flying, hives full of honey from fruit and red bud bloom, which is now making the little fellows happy, judging from the music among the flowers. Some colonies have commenced queen cells already, and they have not been pushed any either; neither are we away down south, only on the 38th parallel. Our prospect for a rich harvest is promising." J. W. Henderson.

Winnesheik Co., Iowa, April 9, 1878.

"I put 43 colonies in the cellar, about December 1st, and took them all out February 1st; all but 3 were in good condition; these were weak last fall, and I did not expect to save them. Two were robbed when I was away from home, the other is doing well. There was but very little loss of bees. I winter in the cellar." O. E. Cooley.

Constantine, Jan. 15, 1878.

"1. What are we to do, that have invested in patent hives? How can we dispose of our colonies of bees. I suppose we can sell hives and bees, but has the purchaser a right to use them? I refer to Mitchell's adjustable hive. He claims a patent March 9, 1875, for 17 years. I think it an excellent hive, but do not want to increase in a hive that I cannot dispose of. The patent seems to be the division boards, by which the space can be diminished or increased at pleasure. I see Mr. Doolittle is using something similar, and others, claiming that it was not patented. I wish to be on the safe side—therefore the inquiry.

2. Why could not a plain home-made sheet of wax be used for foundation combs? If the bees have the material, will they not construct them as well as when they furnish the material themselves? I mean to try it in the spring. A NEW SUBSCRIBER.

[1. Mr. Mitchell says he waives all right in such a case of purchase. His patent is *not* on a division board—but the use of it with "lugs" and rubber strips. Any one can use a division board; the "lugs" and rubber strips are non-essentials, and are useless in any other hive. The hive proper and frames are not patentable, and it is not likely that the purchaser would be disturbed. If you *like* that hive, there is no reason why you should not use it—but we think the Langstroth would please you better, and would be more desirable in the sale of colonies.

2. Bees will supply the wax, or will generally use such as may be supplied, whether the base of cells be impressed or not.—ED.]

Lansing, Mich., April 15, 1878.

"I have unpacked my bees, and found all alive and in a very healthy condition; there being brood in every card, except the two end ones. Drones are hatching very rapidly. My bees were wintered out of doors. Inside boxes so as to fit over the hives, allowing a foot between the boxes and hives; from the entrance I had a passage-way, so that bees could go out at any time. The space between the hive and box was filled with straw; this had a roof, so as to keep out water and snow. I think this the safest way to winter on summer stands. It is the same as Prof. Cook recommends in his new book." FISK BANGS.

Nahua, Iowa., April 13, 1878.

"Bees wintered well; I wintered in the cellar and did not lose a colony. The prospect is fine for a good season. I bought my queens last year of J. Oatman & Co., and they were very prolific—keeping their hives full of bees and brood. I have kept bees for 9 years, but the Oatman stock bear off the palm for being quiet, peaceable and good to handle. I shall re-queen 50 colonies this season, and want no other kind. I shall raise all my queens from the Oatman tocks." E. J. SCOFIELD.

Southern Notes,

GLEANED BY

W. J. ANDREWS, - COLUMBIA, TENN.

KIND FRIENDS:—With this number we withdraw from the management of this department. Our love for the busy little insect and their managers is as strong as ever. We love to handle bees, and converse with those who handle them. To us, it has always been a pleasure to receive and answer letters pertaining to their management. We never engaged in the business with a view of any gain, but solely for a pastime and the pleasure it afforded us. To handle bees successfully, especially for profit, requires strict attention; as much so as any other business. My business has assumed a shape that it will require the whole of my time—undivided with any other occupation. I have, therefore, arranged with a friend to take charge of all my hives, and I withdraw from the business in toto.

With many thanks for numerous acts of kindness and wishes of good feeling I have met with at your hands, and with kind wishes to all, I am

Yours truly, WM. J. ANDREWS.

For the American Bee Journal.

Honey Dew.

Some contend that it is evaporated from flowers, and falls on the leaves of trees, as other dew; others are of the opinion that it is wholly the product of aphides; and others, still, think it is the product of exudation through the pores of the leaves of certain trees.—That it is caused by evaporation from flowers is at variance with reason, since saccharine matter never exists in a volatile state, and cannot be taken up in the air by the process of evaporation.—This is fully demonstrated in the art of sugar and syrup making. Then we must look for its cause either as the product of excretion from aphides or exudation from the leaves of trees, or from both causes. We assume that it is from both, but mainly as the product of exudation.

That from exudation, which is always during dry, warm weather, is doubtless caused by an effort of nature to perform her proper functions, which have been partially suspended by exterior causes.

This is forcibly exemplified in the foliage of certain trees, such as peach and plum, which have been injured by late frosts, the result of which is an exudation of saccharine matter much sought for by the bees. It is an effort similar to that brought into action by pomologists to force fruit trees into bearing, &c.

But while we are satisfied that honey dew, with us, is mainly the product of exudation, still we have evidence that it is not always so.

Aside from the aphides, so often spoken of, and so minutely described by naturalists, we occasionally find, in this part of our great domain, masses of small semi-globular, animated beings, (don't know what to call them,) which appear to be almost destitute of both life and motion. They are found on the twigs and small limbs of young poplar trees. Beneath them, when numerous, the leaves, branches, weeds, and even dry leaves are literally covered with honey dew, and bees visit such places in great numbers. That this is the product of exudation is out of the question, from several considerations.

1. The honey dew is never above, but always beneath them. 2. These beings could not be attracted there, since they are apparently destitute of the means of locomotion. 3. If, in this, it was caused by exudation, all poplar trees would be effected at the same time and in the same manner.—4. The whole of the same tree is not always thus effected.

From these considerations, it is apparent that the so-called honey dew is the result of both vegetable and animal agencies. TENNESSEEAN.

For the American Bee Journal.

Moon-beams from Georgia.

IMPROVEMENT IN BEES.

The proceedings of the North-Western Ohio Convention, on page 48, Feb. No., should be read with interest, by all breeders of the pure Italian bee.

The resolution offered by Mr. Williams, discouraging the traffic of cheap untested queens, and urging the purchase of only pure, choice queens, was one that will meet the views of all intelligent "breeders." The intelligence manifested by members of that convention, in sustaining Mr. Williams' resolution unanimously, speak volumes to their praise. They have a higher aim than filling the country with an impure stock. If the same spirit was manifested by other bee conventions, we might hope for greater improvement in the Italian honey bee.

The resolution adopted by that Convention shall be practiced by all sustaining the purchase of nothing but pure tested queens; then, and not till then, can we hope for much improvement in Italian bees.

BEES, HERE AND THERE.

Reports from nearly all parts, show that bees are in a fine condition.

R. Davenport, of Richland Springs, San Saba Co., Texas, writes that he has transferred 62 colonies of bees, this winter, from log gums to frame hives, and he has over 100 more to transfer.—He took from 10 log gums 1000 ℔s. of honey; that he has been a bee scholar 20 years; and that San Saba county is the best for bees and honey of any he ever saw.

APICULTURAL PROGRESS.

American apicultural progress ranks among the marvels of the age. The great growth of this enterprise has not only been a theme of earnest inquiry, but one of speculation. Even amid conflicting views and opposition, the progress of apiculture has moved steadily and nobly onward, until we might say, in fact, that it possesses a national "life;" progress is the life and theme of Americans.

HOW TO MANAGE A HIVE CONTAINING FERTILE WORKERS.

First, give them 1 or 2 frames of brood from some strong colony, place the queenless colony on the stand, where one of the strongest colonies stood; placing the strong one where the queenless one stood. The queenless colony will receive large numbers of bees, that, finding no mother in the hive, will soon regulate matters, and have queens in progress at once. This plan seldom fails to get rid of a fertile worker, and the new queen will reign supremely.

Colonies having no queen should receive a frame of sealed brood, occasionally; this will keep them strong until a fertile queen can be given them.

ITALIAN BEES.

No other part of the world has made greater advances in the production of honey than America. This leads to the belief that this enterprise is fast approaching perfection. It is with no slight feeling of pride that we make these observations.

For years public attention has been directed to the introduction and improvement of the Italian bee. Importation after importation has been made, no doubt, with a view to improvement. The question is now asked, how for, or to what extent, if any, these efforts have been successful? Have we, by careful and judicious selection of this bee, increased their qualities, *viz.* size, prolificness, industry, temperament, color, ability to defend and lay up large stores of honey, &c. The question is, have these qualities been improved since their first introduction into this country? If we were permitted to judge, we should say that we have failed to see the improvement made, by many American breeders, that should have been made.—They are as much susceptible to improvement as any other stock; and had they received the necessary care to develop and bring those qualities out, it would be apparent now. But we cannot expect it under the present system of management. While so many are engaged in breeding, and sending all over the country, hundreds and thousands of untested queens, just so long, we shall see improvement in the Italian honey bee retarded; it cannot be otherwise. Hundreds of these queens are impurely mated, and many of them are sent into places where the Italian bee is bred in its purity. It will be necessary, in order to continue, to breed them pure, to get rid of these impure bees.—This costs time, and is very much to the injury of those breeding genuine stock.

This system will, no doubt, continue until people appreciate the value of pure stock.

Rome, Ga. A. F. MOON.

Swarming and Surplus Queens.

MY MANAGEMENT FOR SWARMING.

I am professionally a telegraph operator, and keep bees for both amusement and profit. My business keeps me away from my pets during the day, and I have been somewhat concerned as to what plan I shall pursue during the coming swarming season, and have decided upon the following:

1. I shall have 2 or 3 very light, portable hives, made to contain 6 Gallup frames, so arranged that they will not shift about while carrying the hive from one place to another. I shall have a large opening, covered with cloth, in the bottom of each, to allow plenty of ventilation.
2. I will have all my empty hives properly arranged where they are to remain.
3. I will have every queen with one wing clipped.

Now for the mode of operating:—Whenever a swarm shall issue, I will have my wife to catch the queen and cage her, which she can do very well.—Then cover old hive with a cloth, so as to hide it from the returning bees.—Then place the portable hive in front of the old stand, and as soon as the bees commence to return, release the queen in front of the hive. As soon as all are in, she will remove the portable hive, and place it upon the alighting board of one of the new stands, and remove the cloth from the old hive.—Thus they will remain until I return home in the evening; and then, I will remove the frames and bees to the larger hive, where they are to remain, and make everything snug.

HOW TO KEEP SURPLUS QUEENS.

I have a frame, made very much like the one described by Mr. Davis, (page 134, vol. xiii, A. B. J.,) but differs in some respects. The frame is divided into sections; one side is covered with wire cloth, the other has small doors, made of perforated tin. In each section have a shield, made by bending a strip of tin about 1¼ in. wide, and 4 in. long into the shape of ⊔. In this I put a piece of comb, containing honey. I fasten the tin in with a tack.

In this frame of cages I keep all rejected queens, and I think it will answer very well for surplus queens. I place the frame with the queens in a strong colony, and there they will live all summer. In winter they are apt to chill to death. I have no doubt that this plan of keeping queens can be made very useful to some bee-keepers.

S. C. DODGE.

Chattanooga, Tenn., March 19, 1878.

Sumter Co., Ala., Feb. 22, 1878.

"1. Bees are bringing in pollen and honey. If too bountifully supplied, shall I use the extractor for the brood chamber at swarming time? 2. How can I keep the queen out of the surplus department? 3. If a comb is full of honey, and only partly capped, would it be safe to extract without waiting for it to be finished? 4. How shall I unite 2 colonies? 5. If a hive has a tendency to send out more than 1 or 2 swarms, will cutting out the queen cells stop them? 6. Do you think it advisable to heat honey before sending it to market, to prevent it turning to sugar? 7. Can you tell me what smoker will remain lighted, after laying it down, to use again in a few minutes? Unless I keep mine continually working, it will go out immediately." SUBSCRIBER.

[1. Extract whenever it is necessary to give the queen room. 2. If the surplus department is above, the queen will not generally trouble it. 3. Yes; though it would be better if capped. 4. Remove the poorest queen, smoke the bees thoroughly, sprinkle with sweetened and scented water. If in box hive, shake the bees on to a sheet and hive them together. If in movable frames, select the frames having brood and the most honey, omiting others. 5. Yes.—6. If crystalizing threatens, yes. If not, no. 7. Bingham's will do it.—ED.]

Correspondence.

For the American Bee Journal.

Chips from Sweet Home.

On page 88 of the AMERICAN BEE JOURNAL, James Heddon seems to be afraid of *over-stocking* our bee pastures with bees.—One year ago to day I would have said amen to his two columns, but last season's experience has changed my amen to, that—I started out with 150 hives, located on less than ¼ acre; increased to 200,—think I held the increase down too close, however.—These 150 hives averaged me a little over 100 ℔s. each. This spring, I shall start out with about 270 hives, to be increased to 400, all in one apiary, and shall get in honey—well—we will tell you better next fall, and as F. I. Sage says, on page 75, we will get it by *plenty of hard work*, which is *not* suitable for invalids, &c. "Palmer, how much help do you have?" I will tell you what I have to do this season: Commence with 250 hives, 4 acres of small fruit, 4 acres of garden truck, 3 horses, 5 cows, 4 calves, hogs and poultry; this will be our work to accomplish. I hire one hand. If I could get one trusty, competent person, (such are scarce for bee business), I would start another apiary next season. James, "with-a-head-on," as O. Clute says, we must work bee business as we do fruit. If we could get a very early, or a very late berry, do you think we could glut the market with that? O! no; says you, because we would have the market to ourselves. Very good; a *few* bee-keepers will keep up to the times, put up honey to suit the demand, and get the highest price; and the many, with box-hives, inch-board boxes of honey, will not be able to compete with the few; consequently, the many will not be among the *few* that will supply our large market with honey.

We, at one time, advocated early breeding by stimulating, but we now think, for our location, it is better to not use any artificial stimulation, either by feeding or separating the brood part and inserting empty comb. Such may pay to keep invalids busy on a few hives, but does not us. None need such but poor, weak hives, and these do not pay us to fuss with, as we have plenty of others that will pay. We will try over-stocking, by running 400 hives in one apiary.

There is a lack of honey-producing flowers between apple bloom and white clover for 10 or 12 days. Where wild raspberries are not abundant, it will pay to cultivate some of the best improved kinds for honey and fruit, as they bloom at this interval, filling up this vacancy. The honey is abundant and of the best quality; bees may not store any in boxes, but it keeps up the breeding, so that when white clover blooms they are strong in bees and brood, ready to store the finest of honey in the surplus boxes. Of all persons who should cultivate fruit for profit, it is the bee-keeper, for he has both fruit and honey; the latter giving him some profit more than his neighbor, who does not keep bees. With care, they can be increased quite rapidly. The first Sweet Home I raised in 1873; in 1874, I raised 22 plants, and fruited the finest Black Caps that I ever saw; in 1875, I raised 50 plants; in 1876, I raised 28 plants from the original bush and 585 in all; in 1877, I raised about 3000 plants, of which my brother bee-keepers have availed themselves of quite a share. They can be planted any time in the month of April. Set 3 feet by 6 feet, and cultivate as corn.

We frequently have persons call to see our apiary, ask questions, &c. We take pleasure in showing them anything of interest, and answering a reasonable number of questions, but there is one class I wish to allude to. and such have just left. They came 10 miles to see things and ask questions. This was all right, but among the first questions I put to such is: "Do you take a bee journal?" Usually those who are over inquisitive do not, and will remember but very little you have told them. Such were my visitors to-day, and after spending 2 hours of precious time to me, I quit answering questions. The last two questions were: "How do you transfer, and how do you raise queens?" I answered them thus: "It will be cheaper for you and me, for you to take a bee journal; then you can read at your leisure, remember and put in practice. What I tell you, you will not recollect." The last words I said to them were, "Take a bee journal."

On page 71 of the AMERICAN BEE JOURNAL, A. J. Cook thinks patents are a public benefit. I, for one, think otherwise, and will say in regard to bee-hives and apiarian supplies, that there has been far more money spent in patents than the benefits arising by the sale of them. Patents has been a bee-hive for sharpers, humbuggers, and a few workers. It has been the means of keeping the price so high on many improvements as to hinder their introduction to honest, law-abiding citizens.

Eliza, Mercer Co., Ill. D. D. PALMER.

For the American Bee Journal.

Experience of a Beginner.

I have been taking the AMERICAN BEE JOURNAL for nearly 2 years, and I think I can safely say that no person can advance very rapidly in the culture of the honey-bee without having the JOURNAL as a guide, to instruct in the science that bee-keepers must necessarily possess.

I have been engaged in this pleasant and lucrative business for nearly 2 years, and I think I have succeeded remarkably well for a beginner. I have, 20 colonies in good condition.

I am partial to the Langstroth hive, which I am using. I consider it the best hive for general utility that I ever saw. I keep them well painted, and a little elevated, to protect them from the ground. I winter my bees on their summer stands, with nothing to protect them from the winter's cold, but a board roof or covering.

It is very important for bees to go into winter quarters with strong colonies. If weak ones, two should be put together, as it does not pay to feed a weak colony through the winter, and then get them robbed in the spring; at least, that has been my experience, so far. Robbing is something that seems hard to control. The best preventive that I know of is to have no weak colonies in the apiary, and then each hive or colony has a chance to defend their homes and stores. We have had a very mild, wet winter; my bees have done well.

For the benefit of some beginners, (like myself), I will give my plan of building straight comb. My method will apply to those who advocate natural swarming, (of which I am a strong supporter). I think bees do much better when allowed to do their own swarming; they fill their hives much quicker than artificial swarms do. I have examined 6 of my hives that I put natural swarms in this spring, and in none of them found a single crooked comb. For building straight comb, I place my hive, containing new swarm, on a level place where I intend it to remain; then, with blocks, or something suitable, raise the back end about 4 inches higher than the front end. I have the comb guides of frame waxed with a little warm wax. When my hive is put to suit me, I regulate the frames in the same and close it up. Late swarms, should be given brood from strong colonies, to give them a start.

I read an article in the AMERICAN BEE JOURNAL, February number, on the subject of "Honey Dew," which met my approbation. I think it the best article on the subject I ever read. W. T. SEARS.

Warren Co., Ky., March 13, 1878.

For the American Bee Journal.

How to Use Prize Boxes.

The present season will be the first that many bee-keepers will use the "prize" section boxes. I have learned a thing or two, that I think will be of value to those having had no experience with them. The first impulse will be to make the sections into a box of the desired length, either by "paper strips, glued on," or by some kind of frame to hold glass and frames together, by wedges or other means. The holes or slots through most honey-boards, or tops of frames, are none too large to allow the bees to pass readily into the boxes; and some will be very apt to put on these boxes, with the wide, flat pieces on the bottom, so as to cut off most of the space, into the boxes, and more or less dissatisfaction will be the result.

These sections are certainly a great improvement over anything we have had before; all that is wanted is to "give the bees a chance." If the honey-boards or top of frames are pierced to correspond, (or even a little larger than the slot-holes in the bottom of boxes,) all will be well. The majority of hives, however, are not well adopted to have these boxes put on in the ordinary way.

After some experience and considerable study, I have adopted what I consider "just the thing." Take a common lath, 1½ inches wide, rip it into two equal pieces; plane, leaving it ¼ in. thick; make it of suitable length, according to number of frames, and allowing for glass at ends. Now nail to the ends of these strips a piece of lath, plained edgewise. And now, tack a piece of tin on the sides, the width of the end pieces. This will form a very convenient pan to set the sections into; and if made exactly right, will hold the frames and glass firmly together, and form a very neat and strong box. But why this ¼ inch space over the frames? I have 2 objects in view in giving the bees this space:

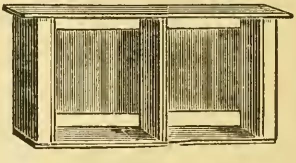
1. It will allow them all the room there is to get into the boxes.
2. They will build comb, full size of frame, instead of leaving ½ inch space at the bottom to run through, to get from one comb to another.

This is especially the case, when put on a hive with tight frames. If you object to leaving this space, and you can arrange to give the bees room enough to pass readily into boxes without, you can make the pan in this way: Take 2 strips of tin, for sides, of the desired length, turning ½ in, like an ┏ Then nail the wooden piece on the end, and the thing is done. If you find the frames and glass fitting too loosely, fold up a little brown paper and wedge in between the glass and the wooden ends.

Either of the two plans is an advantage over other methods I have heard suggested for holding frames while on the hive. The frames occupy no more space than when held together with paper strips. The holders are easily and cheaply made, and do not stain sides of frames as with glue.

Milan, Ill. C. H. DIBBERN.

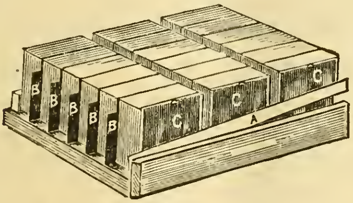
[We think the plan for holding Prize Boxes on the hive, as used by friends Doolittle, Betsinger and others, the best. That is, in a "case" 2 inches wide on the top and sides, and 1¾ inches on the bottom, to hang in the hive by a projecting top-bar, as shown in the cut. This keeps the outside of boxes clean and nice for marketing, and the separators used between each case, prevents the combs from being built crooked. As they use a hive similar to the Gallup—their "case" holds but two Prize Boxes, as seen by the cut. If the Langstroth hive is used, the case just takes three,—and seven of these cases fill a story for the latter hive, making 21 Prize Boxes for each.



CASE TO HOLD TWO PRIZE BOXES.

Another plan, and the best we have seen in that line, is the Rack, as made by Sperry & Chandler, holding 18 Prize Boxes, with the Separators between them, marked B B in the cut. The wedge, A, holds all with a vise-like grasp. The outer boxes are glassed, as they stand on the hive (C. C. C.). By removing the wedge, A, any box may be instantly removed, examined, returned or replaced by an empty one—the spaces between the rows readily admitting the fingers, for that purpose.

These, so made that they rest at each end on a piece of sheet-iron bent thus ┌, prevents their being fastened by propolis. A piece of tin, 2 inches wide, running under the ¾ in. strip, dividing the rows of boxes, projects ⅜ inch on either side and forms an excellent support for the boxes. The separators are 5 inches wide, and rest on the frame of the Rack, as seen at B.



RACK FOR LANGSTROTH HIVE.

A similar Rack is also made, containing 12 Prize Boxes, for the American hive, and Worrall's Centennial hive.

Friend Dibbern will here see some of his ideas already adopted, and from these plans for obtaining comb honey in the most marketable shape, he may be able to glean something even more *progressive* than his own ideas. Comparing Notes, in this way, is advantageous to *all*.—Ed.]

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For the American Bee Journal.

Texas as a Bee Country.

I came from Michigan to Texas nearly 3 years ago. This portion of Texas, where the climate is so mild and genial—where flowers bloom nearly all seasons of the year, and where bee food can be raised at ALL seasons, in inexhaustible quantities—is one of the best and most profitable bee countries in the world.

The question of "Which is the best method of wintering bees" does not trouble us here, for there is scarcely 20 days during the entire winter but bees wintered without protection on their "summer stands" will be out "taking a fly," and generally "making *honey* while the sun shines."

The possibilities of South-western Texas are, as yet, almost unknown. The stock business, and cotton have heretofore monopolized the attention of the people, even to the exclusion, until recently, of corn and other necessaries of life. Nearly "everything under the sun" will grow in this soil—most things with care, growing prodigiously. With a climate as genial as any in the world, and perfectly healthy, what, I ask, is needed here but industry and a little time to make a man's home and its surroundings "a thing of beauty and a joy forever?" Wm. C. Green.

Oakville, Live Oak Co., Texas.

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For the American Bee Journal.

The Hive I like best.

I like a frame 12x12 inside, because the larger frames are not as good for nuclei, require a larger or deeper extractor, and I have noticed, as well as others, that the queen prefers as nearly a perfect circle as the comb will admit of for laying, especially early in the season. So here are 3 good reasons for adopting that frame.

Last year my attention was particularly directed to the distance between the frames, by an article in *Gleanings*, or *Bee-Keepers' Magazine*, by Mr. Harrison, of Virginia.—I made the experiments he suggested for a beginner, and sure enough, at 1½ inches apart, from center to center, the bees built on the inside of the guides, and very commonly made their combs between the last frame and side of the hive; so I decided upon 1⅜ inches.

Next, the hive question came up, and from all I could learn from books and bee papers, the best plan was to winter on summer stand, provided one had a hive that would resist the winter's cold; and such a hive is calculated to resist the summer's heat as well. Not able to afford money or time to experiment with Finn's, Worrall's, or other double-walled, high-priced hive, and having tools of my own, after writing for estimates from several markets and hive factories, I decided to make them myself; this year at least. Took ⅞ stuff, dressed on one side, made a brood chamber that is a cube of 13¾ inside, with ½x½ in. rabbets; nailed a strip, 1x½ inches, round outside, 1 inch from top, and another around the bottom edge. For sides of outside wall, or case, took the same stuff, but turned the smooth side out, instead of smooth side in, as with brood chamber; cut the sides so as to put back end in mitring, and extend in front for portico, and cut to slope roof of portico from 1½ inches from top of case to 6 inches from top of bottom board. Cut front board of case to fit under roof of portico. Bottom board is 16½x20 inches, grain across, and sides and back of case, cover and mask it, so as to keep off all wet and cold. Nailed bottom board to oak sills, running fore and aft of hive, and cut sloping in front for bees falling on ground to crawl up on, as given in Cook's *Manual*.

A screw on each side, through low edge of case, fasten bottom to hive for transportation. Cap 7 inches deep, house-roofed, and triangular strip to cover, joined at edge.—This for box honey, and tiered up, "Simplicity" fashion, if needed; using Quinby's hive clasps for lower belts if you wish; but for extracting, I have made an upper story, just like brood chamber, double-walling it the same way, and making a flat cover with a ridged roof over it, to guard against heat. Upper ventilators are through flat cover, and then through gables of roof, ventilators for brood chamber through lower, back corners of inside walls and front, lower corners of outside walls, none of them admitting light.

Now, is it not best for a beginner to make haste slowly, and use such a hive as this, than to go it on the cheap and use a poor hive? Working from patterns, I can make 2 in a day, with the 7 inch cap. The hive for extracting, doubled and complete, will take 50 feet of lumber, but it can be used, temporarily, single, in part or throughout, till you have time and means to put case on; and so can many others.

A 12x14 glass can be put into the back of brood chamber, with a close, double cover, hung on hinges; but, this would be more curious than useful, perhaps, and when you have many visitors, a source of annoyance to the bees, the thing most important is to have a hive of the proper size, but especially to resist the changes of temperature and the extremes of every season.

Those looking for a business in which they can make something out of nothing, or a great deal out of very little, will have to look farther than bee-keeping before they find it. Bee-keeping will pay, but only in proportion to the amount of capital, intelligence and industry invested in it. It takes, perhaps, less money to start in it, but what it does not call for in cash has to be made up in knowledge, pains-taking, and persistent industry; and to any, or all, who think of trying to grow their own honey, I would say, get a book before you get any bees.

Winchester, Ill., **Wm. Cam.**

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For the American Bee Journal.

Wintering, Robbing, &c.

I commenced last season with 27 colonies of bees; part hybrids, and part pure Italians, in the standard Langstroth hives. Of these colonies, 7 were quite weak. The others were in good condition. I hived 7 swarms, one of which I gave away, and 2 left for the woods after being hived. Other swarms came off, but at times that I was not observing, and they went off. So my colonies were increased to 31. From these bees I took about 2,500 lbs. of honey, part comb, but most of it extracted. This honey was gathered mostly in June and July. We have no fall harvest here that amounts to anything. My honey netted me $500.00. A portion of the honey I take, (that which is gathered when the linden tree is in bloom), when poured from one jar to another, effervesces. It does so every season, and continues to till cold weather. Persons not familiar with the honey would at once pronounce it souring. But it never has soured. Leaving it in the hive till capped, it effervesces the same.

In the fall I thought I had 31 colonies in good condition for winter. All had a good supply of honey, and seemed to have plenty of bees. About the 1st of Dec. I discovered 1 colony dead and all stores gone; robbed, I suppose, by other bees, after bees had died, or were not in condition to protect themselves. Shortly after, I found a colony with many dead bees on bottom board, but before had noticed robber bees disposed to trouble it. I opened it and found bees sluggish. I changed them to a new hive, but they soon perished.

About the middle of December I discovered my bees eagerly engaged in robbing.—Did all I could to control it, but with little success. Several colonies were destroyed. The ones attacked must have been affected similarly to the one above mentioned; for my assistance availed nothing. Had they been in vigorous condition, the contraction of the entrance would have enabled them to resist the robber bees. It may not be improbable that 1 or 2 of the hives were queenless.

After the cold spell in January, I found several other colonies dead, and several very much reduced in bees. Some of these colonies had nearly every cell filled with honey, a considerable portion of it uncapped, and some quite thin. One colony of Italians had their hive filled so that hardly an empty cell remained, and with the same kind of honey. They were pretty strong, and passed through the cold spell in January, though having so much honey, without injury.

I continued to lose my bees till I lost 19 colonies out of the 31 I had in the fall. I have kept bees since 1872, and this is the first loss of bees in wintering that I have ever experienced. I winter on summer stands; and till this winter, 1 or 2 colonies, lost from oversight as to stores, or by the loss of queens, has constituted all the failure I have met with in wintering bees.

Goshen, Ky., April 2, 1878. **Jno. Rule.**

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For the American Bee Journal.

Detroit Honey Dealers.

Press of business prevented our reading the excellent article from the pen of W. L. Porter, in which he kindly informs us, (the bee-keepers of Sanilac and Lapeer counties), that the dealers of Detroit charge us with buying sugar to feed to our bees, to make honey. Now, I am acquainted with most of the bee-keepers of Sanilac, living, as I do, in the center of the county; and I know, and am authorized to state that the charge is false.

We invariably go to Detroit in the month of October, to market our crop, and any person should know, that knows anything about bees, that we cannot feed sugar or anything else after that date. Some of our bee-keepers, while in Detroit, buy their sugar, tea, coffee, boots and shoes, also other necessary articles, to last them till their next yearly pilgrimage to Detroit, for the purpose of selling their honey. Why do those dealers not charge us with feeding tea, coffee, boots and shoes to our bees to make honey? We will call a convention of the bee-keepers of Sanilac and Lapeer counties some time in June or July, and will probably take some steps to teach a lesson to the dealers in Detroit, by sending our honey to, and purchasing our supplies in, a more honest, and less suspicious market.

Bees all right. Have 74 swarms. Wintered on summer stands.

JAMES ANDERSON.
Farmers P. O., Sanilac Co., Mich.

Average Results.

No page of the JOURNAL is, to me, more interesting than the statement of the operations of the North-Eastern Bee-keepers' Association. From the one given in the last AMERICAN BEE JOURNAL, the following averages may be obtained, as the labors of 24 bee-keepers :

No. of colonies in the fall of 1876	1777
“ “ “ spring of 1877	1239
“ “ lost in wintering	538

Making a loss of 30 per cent.

As the result of the summer's work:		
Commenced with	1265	colonies.
Increase	850	“
Box honey taken	68366	pounds
Extracted	7166	“
Total	75532	“
Wax	494	“
Extra Italian queens raised	197	
The average per hive (in spring) was:		
Box honey	54	“
Extracted	5⅔	“
Total	59⅔	“

The increase of colonies was 67 1-5 per cent.

Average depth of frame used, 10⅓ inches.

Annual increase of colonies from the fall of 1876 to the fall of 1877, 17 per cent.

B. LUNDERER.

For the American Bee Journal.

Hives—Boxes—Wintering.

DEAR EDITOR :—In reading the Michigan Agricultural College Apiary Report, of 1877, I see that Prof. Cook speaks in the highest terms of the Russell honey box.—While I have always contended that it was the best box in use, for all purposes, still, I claim to have a better one now. I have, since our Convention, invented a device for glassing the light, bent-wood section, exhibited at our Michigan Convention, by Prof. Cook ; thus making a lighter, cheaper, and neater, single-comb box than my old one, or any other that I have ever seen or heard of ; susceptible of being glassed before or after being filled. I will send one to your Museum within a few days.

He also makes favorable mention of the Russell hive, but does not think it quite as convenient as the Langstroth. By way of explanation, I wish to say that Prof. Cook has, I think, one of the first lot that I made, with inside fastenings at the top and bottom, which made them rather inconvenient to handle. I saw it, and almost immediately improved upon it, by putting side fastenings on the outside. With the advantage of this improvement, and others that I have made since.

I will make this offer, *viz* : I will give, to any man, hives enough to furnish his apiary for one season, who will handle as many frames of any movable hive, in the same length of time, and kill as few bees as I do in my sectional hive ; all other conditions being equal. To be done at the next State Fair, at Detroit.

The Professor also speaks of having read in "Bevan, on the Honey Bee," of essentially the same thing. I have a hive in my possession, presented to me by Mr. Hetherington, who has them in practical use, one of the late Mr. Quinby's last inventions, the brood chamber of which is essentially the same. A closed-end frame, or sectional hive, tied together with a string, and very expensive, though the principle is right, in my opinion. A closed-end frame, a box hive, or a sectional hive, are the only ones that I have ever seen that I consider fit to do out-door wintering in. In either of these, every comb is nature's division-board, and the bees are able to adopt themselves to their own circumstance, and are not dependent upon the apiarist to move the division-board whenever there is a change in the internal condition of a colony.

I will close by saying that out of 120 colonies I have not lost one, and don't expect to. I examined 100 colonies in my cellar, yesterday, and find them as sweet as a rose, and in better condition than I ever had a lot of bees at this time of the year. They have not had a flight since November 1, and they will not need one until they can get pollen and honey. I have kept the temperature between 40 and 50°. They have not consumed over 5 ℔s., on the average, yet ; some not over 3 ℔s. The warmer you can keep them and have them quiet, the less honey they will consume. Those wintered on their summer stands are all right.

Adrian, Mich. A. H. RUSSELL.

For the American Bee Journal.

Bees and Honey in Scott Co., Iowa.

As there has been no report through the JOURNAL, during the past year, from this county, in regard to bees and honey, I will give a few items:

The present winter has proved, so far, the mildest during the 24 years I have resided here. Bees are wintering splendidly. I have not heard of the loss of a single colony yet. In the winter of 1875, I had 32 colonies; it was a mild winter here, lost but one swarm. The winter of 1876-7, I tried to winter 50 colonies, but from the middle of November until the last of January, it froze all the time. I had my bees protected by straw, all around, except in front, also chaff in caps ; plenty of honey, yet I had the sad satisfaction of being the owner of but 10 colonies, by April 1. I did not wish to lose so much valuable comb, so I purchased 20 colonies of Mrs. Grimm, of Wis.

Commenced with 30 colonies, increased to 66 and got 1400 ℔s. of comb honey, and about 400 ℔s. of extracted. The past season was not extra good, but when I get an average of 60 ℔s. per colony, I will not grumble ; 6 of my Grimm colonies filled a case of 24 frames each ; average, 44 to 46 ℔s.

In this county, our main honey crop is from white clover ; but very little basswood can be found. I have been cultivating alsike, for the past 8 years ; find it splendid for the bees, and when sown with timothy makes better hay than red clover ; it never has winter-killed with me, while red clover often does.

Now I wish to tell my brother bee-keepers how I got 3 crops from the same piece of land the same year, for the past 8 years.—As soon as I have a piece of grain harvested, I plow and sow to buckwheat—the past season I sowed 10 acres to buckwheat—where I have a good crop of wheat. Owing to dry weather, it did not sprout till the 37th of July; had a yield of 22 bushels per acre, and realized $1 per bushel, by selling the flour. So there is where the third crop comes in. The past fall for buckwheat honey was not a good one, yet my bees gained about 15 ℔s. per colony, during buckwheat bloom. This buckwheat honey was nearly all stored in the brood chamber. I have no idea what amount of honey can be gathered from an acre in a good season.—My bees had access to my neighbor's 11 acres of buckwheat, where he harvested a crop of barley; yet, while my bees visited his, other bees came to mine. I believe it will pay farmers, who are bee-men, to try this plan.

I said my bees gained 15 lbs., per colony, during buckwheat bloom; let us say 10 lbs. Now 66 colonies would make 660 lbs., or 66 lbs. per acre. This certainly will pay for sowing to buckwheat, even if we get no buckwheat cakes on a cold winter morning. Having purchased a few colonies at a sale, I now have 70 colonies in good condition, all on their summer stands. GEO. L. GAST.

LeClaire, Iowa.

For the American Bee Journal.

Spring Dwindling, Hives, &c.

I have just returned from my other apiary of 22 colonies; all answered to the roll-call, and are gathering pollen in great abundance. The roll-call at home is 64; 3 having "gone up," by my negligence or oversight. All, thus far, seem to be in good condition. The honey season here will not open till near the 1st of May, and by that time, half, or more of my bees will be shipped off, as is my custom every spring.

SPRING DWINDLING.

Here I would recommend to all who wish to understand the Italian bees and their difference from the native bee, to read again the article in the March No., page 74, by I. P. Wilson. His experience, with the exception of "cellaring," is the same as my own. I have had no experience in "cellaring" bees—always winter on summer stands, and this last winter I have given the strong colonies no other protection than to contract the entrance of the hive; for the weak colonies, quilts were spread over the frames, with the exception of the 3 I neglected, and that died in consequence.

As to safe wintering, I will say this: I can take any number of colonies in Nov., and fix them for winter, in such a manner that I can insure every one to winter safe, no matter what sort of a winter.

It was several years before I could account for the Italians being so weak in March. My first discovery of the cause was as follows: One day in Feb., as I came from the tan yard, with a roll of leather, and my overcoat buttoned tight, for it was cold. Two bees lit on the leather, to rest. They were both Italians, and nearly a quarter of a mile from the apiary; they remained on the roll till I threw it down at the shop door, and were so chilled by that time, as to be unable to fly.

On another occasion, one evening after they had had a fly, I walked out in the apiary, and to my surprise, the fences, tops of hives, &c., were covered with chilled bees, unable to move. I think, on this occasion I lost, at least, bees enough for 2 or 3 colonies. I have seen this repeated several times, but never, as yet, have I caught black bees guilty of the like. If the Italians would only be as careful as the natives, while the weather is too cold, not to venture out, they would come out in the spring stronger than the natives, but as the case stands, they are not more than half or two-thirds as strong as the natives on the first of April. Yet, they recuperate with such rapidity as to surpass them when the honey season has fully opened.

HIVES.

In speaking of the invention of hives, we may well say their "names is legion." I have examined several new patents during the last 6 months, none of which I care to try, even if given to me; but not to injure the sale of any of them, I will name none of them; but will say, the only men who are qualified to invent a hive, that will answer its purpose successfully, are none other than those who have had close experience with bees for 8 or 10 years, at least; and such as have a thorough knowledge of the habits and manipulations of the bee. Yet, how few novices there are in the business a year or two, that do not invent a hive!—This injures the bee business as much as anything. Such novices would do much better to follow, instead of trying to lead the old veterans. How forcibly does the present state of things remind me of the fulfillment of a dream I had a few years ago, while Mr. Clark was editor of the JOURNAL. I wrote the dream and forwarded it for publication, but friend Clark saw fit to drop it into the waste basket—the first I ever wrote that found that destination.—The dream is as fresh in my memory to-day as the day I wrote it; and is now being fulfilled to the letter. I will not give the dream here, but give one single instance, to show its fulfillment: I saw all these hives and box patents, in the shape of different birds, in one large tree, and when a tremendous large gun was fired at them, all that were killed, have lain dead since. The Langstroth hive was wounded in the wing, but her wing healed up and she finally triumphed.

When experienced men look at a new patent, it does not take long to see the faults; but novices, having very little experience, are deceived—buying, not only the right, but the county and state, and finally, in most cases, come to grief. I could name not a few such cases. But I must not be understood as discouraging inventions. I am in favor of them; but there are scores of such inventions never worth patenting, and almost worse than useless. This is the class of articles I object to, and

I would again caution novices to consult the older bee-men, of long experience, before leaping into the dark.

BROOD NEST.

It should never be disturbed. I used to extract brood frames and all; but of late, I have discovered it to be very injurious. If the 6 middle frames of every 10 framed Langstroth hive were let alone, and never disturbed, the colony would be stronger, and winter better on good, ripe honey, and consequently, free from dysentery and other disease. If it was not for finding the queen, and knowing what was wrong with a colony, &c., I would recommend a hive without frames for brood nest. 1800 cubic inches inside, oval at top, to a space of 2 or 3 inches, instead of a flat top. The upper story of a double Langstroth can be placed on top of them. The brood nest being too small to store honey, will force the bees to the top; and that being oval, instead of flat, gives them more rapid access to the top, and concentrates the heat to that point. I shall try a few of them the coming season, but wonder if they are already invented and patented unknown to me.

DIVISION BOARDS.

I read that some one has a patent on division boards. I have been using them since 1866. Did his patent commence previous to that year? R. M. ARGO.

Lowell, Ky., March 7, 1878.

[Certainly not. N. C. Mitchell claims a patent on the use of the Division Board, in connection with "lugs," (*i. e.*, small pieces of iron, for legs), and rubber strips at the sides, &c. A plain Division Board is neither patented nor patentable. His claim covers that combination only. That patent was not issued till March 9, 1875—9 years after friend Argo began to use them.—ED.]

For the American Bee Journal.

Bee-Keeping in Minnesota.

As the bee season is about to open for 1878, perhaps it would be in order to report last season's business. I commenced, a year ago, with one colony, all that I wintered, out of 5. Bought one more of Ch. Dadant & Son, and 3 of I. Ingmundson, (the most successful bee-keeper in Mower county). Two colonies did not swarm, but the other 3 increased my stock to 23. One giving me 7 swarms, and all filled their hives; and between them, over 100 ℔s. of surplus. All wintered well, and are strong in bees, brood, and stores now, and hard at work every fine day on piles of fine sawdust, old bits of comb, and coarse flour.—Hundreds of them go a quarter of a mile to sugar barrels and refuse, around grocery stores, working like beavers. Some of my best colonies do not appear to have used 5 ℔s. of honey all winter; while others, equally strong and prosperous, have taken 15 to 20 ℔s. Who can explain why it is?—They are both strong in bees, not only *apparently* but *certainly*, after *careful* examination.

This is the most singular winter ever known in Minnesota. Only three or four times has the mercury run down below zero, and only once did it reach 11° below.

Bees would have wintered finely on their summer stands, but who supposed they would plow, every month in the year, as farmers have done here.

I buried my bees, by digging a pit, 3 feet deep; with board floor, sides and roof; filling up all spaces between hives with dry, oat straw, and putting about 6 inches deep over hive, leaving a space above for air to circulate; put in 2 stove-pipes for ventilators, one extending below the bottom of the floor, and the other just reaching through the roof, for foul air to escape. Covered the roof with 6 inches of straw, 6 inches of earth, another coat of straw, and about 4 inches of earth to finish off; regulating the temperature with dampers in ventilators, and keeping a thermometer in the escape ventilator. I visited my bees as regular as the day came, and listened for their cheerful hum very anxiously, during the warm, foggy weather of December. At last, the temperature began to raise, and all the ventilation I could give them was of no avail; it run up to 70°, and it seemed as though they were swarming below. Opened out the pit and gave them air, cooled down to 48°, and covered up again, where they remained quiet until March first, when I began to take out 6 a day, until all were out. Have not a mouldy comb or hive in the lot.—They were buried 114 days.

I think I have found the secret of safely wintering. Thanks to very valuable suggestions from I. Ingmundson, Esq., and by using a little common sense, with considerable labor. But where is the true bee culturist who does not love to work among his beautiful pets! I can sit and watch my little laborers for hours at a time, and learn something of them every day, helping a poor, loaded, tired worker into his home, when he drops exhausted, a few inches from the entrance, unable to rise on the wing again; and a bee does not like to crawl far, preferring to light at his own door, close by the sentinels, who stand there to receive the password.

I figure up my bee experience as follows, to date:

Total cash outlay for bees, hives, guide-comb, JOURNAL, extractor, Bingham smoker, cans and the whole paraphernalia	$117 45
I have 23 Italian colonies, well worth $12.00 each, here, but we will call them @ $10.00	$230 00
Extractor, cans, &c., on hand	20 00
Eight extra hives " complete	8 00
Comb honey, 100 lbs. "	20 00
Honey sold, cash	47 00
One queen sold	2 50
Transferring, and hive furnished a beginner	2 50
Total	330 00
Less total outlay	117 45
Total net profit	212 55

This makes a very satisfactory showing, and I think demonstrates that bee-keeping will pay, with "good luck." But don't rob these faithful servants so that they must starve before another spring! Leave them *enough*, or *more* than enough; it is not lost, and it will encourage them to build up strong, early in the spring, give earlier swarms, and more surplus. This is my theory.

In conclusion, I would say, should this article be the means of starting some one in the business, they should bear in mind that about 9 out of 10, who attempt bee raising, fail, for want of "luck," (*i. e.* study and attention), and if you have not patience, and some time to see to them, don't go into it, but as the saying goes, leave it for "those who are too lazy for anything else but keeping bees," which, I think is the reason of so many failing in honey producing.

I want Italians, only. I see by the Journal that a few prefer the blacks. I have tried both, and do not want any more bees that furnish a home and food for moth worms, to their own utter destruction. I find no difficulty in getting Italians to work in boxes. It is not their nature to be idle when they have plenty of room to store in, whether it is in boxes, hives, frames or even glass jars and tumblers. Give them a little nice comb for a starter—that is my method of coaxing them.

I send you a shadow of myself, for your collection, dear Editor.

Success to the Journal. Long may it flourish. C. F. Greening.

St. Paul, Minn., March 8, 1878.

[Thanks, friend Greening, for the shadow. It is placed up in our sanctum—looking over our desk, where we toil every day in the interest of all who love the honey bee.—Ed.]

For the American Bee Journal.

"Dadant vs. Himself."—Answer.

In the A. B. J. for April, George Thompson wants to know when and why I have changed my views on the purity of bees in Italy. Here is my answer:

Although I had not received a single impure queen from Italy, I had heard so many complaints about the purity of imported queens, that when I started for Italy, I was altogether persuaded that the Italian race was not pure.

On my arrival at Milan, I narrated to L. Sartori, that such was my impression. He said that Lombardy was the home of the Italian bee, and that nowhere in Italy were the bees as pure as at Milan. Of course, my letters from that place were imbued with this idea. Soon after, I learned that Sartori was only a queen dealer, and bought queens from every part of Italy—from Piedmont to Venetia; from the Alps to Tuscany. Then I reflected that Mona, a queen dealer too, who had journied all over Italy, had no interest in writing that all the bees from the Alps to Brindisi are pure; but, that on the contrary, Sartori was interested in making me believe that there were impure bees outside of Lombardy. I saw, also, in the reports of the Italian bee journal, *L'Apiculture*, that there were queen dealers, in parts where Sartori had told me that there were impure bees. I received good queens from those parts; then I concluded that Mona was right, and that I had misplaced my confidence in believing the assertions of Sartori.

To give my readers the rate of confidence to which this dealer is entitled, I will quote a part of his advertisement that is in the British Bee Journal. He writes, that his "sole object in selling queens, &c., is to forward the interests of bee-culture, *without regard to his own.*" Yet, if we look at his prices, we find that his goods are advertised at 25 per cent. more than the rates of his competitors.

I am just perusing the article by Mr. Geo. Thompson, on the improvement of the Italian bee, page 127, April number of 1877. He quotes several testimonies, to sustain his idea that the bees of Italy are not pure. Mr. Deus, of Dusseldorff, found the orange colored bees at Genoa, and the black bees at Nizza; and further, another writer says: "We were surprised, on our arrival at Nizza, to find only the common bee there."

For an answer, I beg my contradictor to open a map of Italy. He will see that Nizza, or Nice, is outside of Italy, separated from this kingdom by the Alps. Nice is a French city, which belonged to Italy some 20 years ago, although French by origin and language.

My contradictor has now to rely on Varro, Columelle, Virgil, and Spinola, all writers of another era, to prove his assertion that the Italian bees are a hybrid race.

Hamilton, Ill. Ch. Dadant.

For the American Bee Journal.

Marketing Honey.

During the past 20 years I have raised, bought and sold more or less honey each year, and I know what the trade demands. I was among the first, if not *the* first to introduce small packages of honey in the Boston market, and to advocate the use of small boxes. By consulting the back numbers of the Journal, perhaps it may be found that I was the only person to recommend the use of 3 ℔. caps, some 12 years ago. Now the trade demands even smaller packages. Sections that hold 1 and 2 ℔s. of honey are as large as are needed; in fact, I hardly think that larger boxes will ever be called for again.

Last fall I bought and sold 10,000 ℔s. of honey. It was of an excellent quality, and mostly in 4 ℔. boxes. I could not get any in 1 and 2 ℔. boxes. I have no doubt that I could have sold more, and at much better prices, had it been stored in smaller boxes.

The crates contained too much honey, and one man could not handle them alone. Not over 30 lbs. should be put in one crate, and any amount between 10 and 30 lbs. will not be far out of the way.

The smallest crates were sold first. Not only do small crates sell more rapidly, but the danger of breaking and damaging the honey in handling is greatly increased by using large crates. It is enough to make one's blood boil, to watch the loading or unloading of a lot of honey. They will put a crate of honey on the "truck" when it can be handled much easier and to better advantage without doing so.

I had a lot of honey shipped to Boston,

and was not there when it came in, as it was unloaded in the night, and a worse lot of honey no one ever beheld. There was one ton of it, and all but about 500 lbs. were badly broken.

The bee-keeper who puts his honey up in accordance with the demands of the market will be sure of a good price and quick sale; but the one who uses large, coarse boxes and crates, and a large amount of wood and glass will come to grief. H. ALLEY.

Wenham, Mass.

For the American Bee Journal.

Bee Items.

The past winter was one of the most favorable for bees in many years. I wintered 49 colonies on their summer stands, and did not lose any. All but six of them were at Newcastle, and I did not see them from the 2d of January until the 9th of April. At the latter date I found one colony starving, at least three-fourths of the bees being dead, and the rest barely alive. I fed them immediately and saved a good queen and enough bees to form a moderately strong nucleus. Expecting to remain at Logansport for at least one year more, I moved my bees to this place; the removal by rail, a distance of 80 miles, being effected without accident or loss.

THE SPRING HARVEST.

The show of fruit blossoms, peach, cherry and apple, is simply immense The trees could not be fuller than they are. The peach and cherry trees, at the present date, are passing out of blossom, and the apple trees are just in their glory. From the time the fruit blossoms begin to make their appearance, until this time, the weather has been almost uninterruptedly fine, and the secretion of honey has been very large.

RED BUD OR "JUDAS TREE."

I have noticed in the bee journals, for some months past, inquiries and statements concerning this tree as a honey producer. I have known for years that bees worked on it, but I had not thought of it as especially valuable. At Newcastle, the only place where I have given much attention to bee-keeping are very few trees of that kind, not enough to make it practically of any value. Here it abounds. Biddle's Island, an island in the Wabash river, within the city limits, has a large number of the trees, and there are many of them in other localities within reach of my bees. The yield of honey from them is really astonishing. The bees that have visited the reb-bud are readily distinguishable from others by having more or less of the red pollen adhering to them. I have never seen bees carry larger loads of honey from any source than they do from this. Some of my colonies are storing surplus honey, and in a few days I expect to extract some red-bud and fruit-blossom honey.

ROBBING.

I have discovered, within the last 24 hours, a case of robbing in which the stock being robbed did not seem to be able to distinguish the robbers from the bees of their own hive. The honey was being carried away as fast as a strong stock could carry it, the robbed stock being also strong; and the bees whose stores were being appropriated were working away as if there was nothing wrong. The transposition of the hives (the robbing and the robbed), this morning, has put an end to the mischief. I have observed a number of cases of the same kind before, and I have no doubt that they are more common than is generally supposed. It seems strange that bees should commit robbery when honey is so abundant everywhere; and stranger still, that while the bees that were suffering the loss would seize strangers from other hives, they would permit the bees of that particular colony to carry away their stores without molestation. The only explanation I can give is, that by some means the two colonies have acquired the same scent. M. MAHIN.

Logansport, Ind., April 22, 1878.

For the American Bee Journal.

"On Novice."

We very much dislike to occupy the valuable space of that best of all bee journals—the old AMERICAN—with so poor a subject, but force of circumstances leave us no alternative. We shall endeavor to make the disagreeable task as brief as possible, trusting to a kind Providence to deliver us from a like dilemma in future.

In December last we sent a card to the A. B. J. saying that we should give its readers a few choice extracts from the history of "that $50 damages." Several causes have conspired to delay the fulfillment of that promise—chief among them being the *quasi* promises of A. I. Root.

Under date of Dec. 5, 1877, Novice wrote us an apologetical letter for his previous treatment of us, and in conclusion said: "The matter of the foundation is, so far as I am concerned, perfectly satisfactory." In view of what he had published at the time, we thought he ought to say as much in "*Gleanings*," and wrote him to that effect. In his reply to our suggestion, he offered to leave the whole matter out to a third party for arbitration. But as Novice had expressed himself as being *perfectly satisfied*, we didn't see anything to arbitrate, as we only asked him to say publicly what he had admitted to us, and we told him as much. He then wrote us another of his *peculiar* letters, saying that he was "in a quandary;" that he felt that "something should be said" to us, but that he didn't know what to say, etc. Further on, in the same letter, he said, "Although it was right to give it when you asked that amount (the $50 damages), I cannot for a moment think it was right for you to take it. I can conceive of no explanation that would make it, nor can the people." We thought it a *little funny* that if it was so "very naughty" for us to take the money, *how* it could be so *proper and right* for him to give it. Perhaps he saw the muddle he was getting himself in as he gave this reason for his action; "I gave my money for the sake of peace and good will." It occurs to us, however, that the many bee-keepers whose rights and feelings he has infringed with a ruthless hand, would require a more satisfactory reason.

Becoming weary of a protracted correspondence about a matter which Novice admitted was perfectly satisfactory to himself, and yet which he failed to make so to us, we gave him this ultimatum—either make a satisfactory explanation to the bee-keeping world, or we should do it for him. His reply was characteristic of the man. "I can see no reason why the matter should be given to the public at all," he wrote, and then followed his usual religious exhortation. Thus it will be seen that our efforts to attain an amicable adjustment were a total failure. A dozen lines from the pen of this man, who unceasingly parades love to man and devotion to God, would have settled the matter for all time. But he saw fit to withhold them, even after admitting that something of the kind was due me.

In view of all that has been said, we give the readers of the A. B. J. a leaf from the history of this matter. On July 20, 1876, we shipped A. I. Root some wax to be made into comb foundation. We ordered it made into sheets 12x18 inches, and 6 square feet to the pound. We weighed the wax in the office of the Am. Ex. Co. here, but did not give weight in writing to Novice, as we wished to see if our weight tallied with his. Well, it did—within *ten pounds*. Novice was to have one-half of wax for making it, but he said it was "extra nice," so would send us a little more than one-half of the foundation. We at once notified him of the *error* in weight of wax, and inclosed Ex. receipt, showing weight. This brought a card from Novice saying *somebody* had "made a mistake of 10 lbs., which we exceedingly regret." He afterwards paid us for that amount.

In the meantime, our 24 lbs. of comb foundation came; but instead of being 6 square feet to the pound, as we had ordered it, the greater portion of it was made less than 4 feet to the pound. Having had only a limited experience with the comb foundation, we supposed Novice's experience had induced him to take the responsibility of making thick foundation. The glowing reports which were being constantly published in *Gleanings* had prepared us for experimenting extensively with the foundation, never dreaming that a failure was possible. But it *was* possible, all the same, and cost us more than $200. In looking back over the past, and knowing what we do now, we would not have had it done, even for that amount. We wrote Novice about the matter, giving a detailed account of our experience, and left him to do as he pleased about the matter of indemnity. He replied that as we were "the dissatisfied party, we must certainly make out our own bill for damages." On the following day, (Sept. 9, 1876), in remitting for the 10 lbs. of wax, (above referred to), he said: "We thought best to pay you for this, leaving the bill for damages in making of the foundation, a separate item, at your will." This looked to us as though Novice intended to do what was right in the matter; so we wrote him that if he wished to help us bear the loss, for which he alone was responsible, he might send us $50. Knowing full well, however, how often he had *crawled* out of tight places before, we closed our letter with these words: "In conclusion I will only say, that if you can pay the $50 *cheerfully*, you may do so; but rather than have any hard feelings in the matter, I would lose all." This brought an individual check on the Medina bank for $50, and one of the funniest letters we ever received.—He went on to tell how hard it was to spare the money, and wanted to know if we wouldn't return it. Saying that if we didn't, he could not go to the Centennial, in Philadelphia, &c., &c. The next number of *Gleanings*, however, said that Novice *did go* to the Centennial, and took his "better half" along also.

On October 5, 1876, we wrote Novice a letter, giving in detail the losses we had sustained by using the thick foundation. The following is an extract: "Now, if you wish me to bear this loss wholly myself, I can do so. I *cannot* return a *portion* of the $50, but I can return it *all*." But we received no demand for the money, but did receive a most bitter and vindictive letter from Novice, (dated Oct. 10, 1876), charging us with "willful falsehood and fraud," and calling us pet names generally.

HERBERT A. BURCH.
South Haven, Mich., April 18, 1878.

Kansas Bee Pasturage.

For 2 years we have had very fair seasons for our bees, with the exception of the months of June and July. Red bud briers, fruit trees, &c., in May. In June, bees dwindle; there being nothing for them to forage on. In July they barely live; at the end of the latter month they are not as strong as at the end of May. I was not aware that white clover would succeed in this State, until last year. I was at Leavenworth last fall, and saw there an abundance of it, everywhere in that town and vicinity. For 20 miles west, towards Lawrence, I saw thousands of acres of it, as fine as any I ever saw in the State of New York, also 20 miles south to Kansas City, Mo. I sowed about 2 ounces of seed on the prairie sod, last season, where the ground had not been broken. I could not have wished it to take better. White clover will, in a very short time, be a grand success here.—During the months of August and September hart's-ease affords abundance of forage for the bees. In fact, it is worth all the other plants we have in this region. Every cultivated field is full of it. There is plenty of golden rod here, but bees scarcely touch it, when, at the same time, hart's-ease is swarming with bees, working with all their might. The report of the National Beekeepers' Association, last fall, was worth twice the year's subscription. It was, by far, the best report that I have ever read. There was no foolishness in it, and that is considerable to say for any such public proceedings. No man who has even but one colony of bees can afford to do without a *good* bee journal. I read more than one, but recommend all my friends to take the AMERICAN BEE JOURNAL.

Muscotah, Kan. H. S. HEATH, M.D.

Conventions.

Parasites of the Honey Bee.

READ BEFORE THE N. E. CONVENTION.

A year ago this winter, while examining the dust which is found upon the bottom board, directly under the cluster of bees, in every hive that is wintering well, I discovered several kinds of minute insects. I was making this examination with a strong magnifying glass, for the purpose of satisfying myself more fully in regard to the theory offered by Mr. M. Quinby, in 1874, as to the feces of the bees being voided in a dry state. And here let me say, though foreign to the present topic, that I am fully persuaded of the correctness of this theory, and the importance of the discovery is yet to be recognized as second to none in its bearing upon the requirements for successful wintering.

During both the past and present winters, I have at different times examined hives in some of the leading apiaries of our State, and in every instance have found some varieties of these insects or parasites, to more or less extent. I have so far noticed 6 different forms; whether all distinct varieties or not, I am unable to say. One kind I have hardly been able to retain possession of long enough to determine much about it. It is of a bluish color, and about as fixed in its habits as a flea. When I thought I had him he was generally not there.

It has long been claimed by our best writers, on the subject of wintering bees, that one of the prime requisites for success was perfect quiet. It has also been noticed by many that while some swarms remained very quiet, others could be heard buzzing, and would be constantly uneasy. The fact that some were quiet proves that the uneasiness was not due to any external disturbance. It has often been a subject of much perplexity to me why these different conditions should exist.

Some writers have advised setting such restless swarms upon their summer stands for a purifying flight, and this may be desirable, inasmuch as they have necessarily been stimulated to a large consumption of food by this undue excitement; but the original cause of this disturbance has not yet been understood.

I have given the subject my particular attention, and have found such swarms clearing the dust from the bottom boards, and upon examining this dust as they had thrown it from the entrance, I discovered these parasites in large numbers that had been ejected from the hive. I find the Italians much more liable to be disturbed by them than the natives. Their tendency to defend themselves is here manifest, and they are more easily aroused to action.—This may account for the cases that are cited where the natives winter better than the Italians.

Another proof that the worrying of swarms while in winter quarters is occasioned by these pests, is the fact that the bees gradually leave the hive and fall upon the cellar bottom; and when set upon their summer stands, weak in bees, will be found to be throwing these parasites in large numbers from the hive. They are found in all parts of the hive where the bees can not reach them. Where the mat hugs closely to the top of the frame, they will often be found between it and the frame.

It has often been noticed that during the spring and summer months, young bees are frequently thrown from the cells that have from some cause died before maturing.—Cases have been reported where they have been so removed in large numbers. It seems very probable that these may have been destroyed by the parasite.

I find that some of them frequent the hive, seemingly for honey alone, others seem to be found only in the dust under the cluster, while yet others appear to feed upon the bees, especially the young and immature bees that are thrown from the combs. I have, as yet, been unable to determine whether or not they destroy the bee in the cell, and are thrown with it to the bottom board. It has often been noticed that during the spring and summer months young bees are often thrown from the cells, that have, through some cause, been destroyed before maturing. Cases have been reported where they have been so removed in large numbers. It seems very reasonable that these may have been destroyed by parasites.

It has been demonstrated by the experience of many, in wintering, that when the ventilating slide in the bottom board is left open, the bees, in most cases, cluster lower, and directly over the opening; and are found to keep more quiet. This method has been recommended because of the evidently better results. I had supposed that the advantage lay in the fact that they were more certain of their freedom from the opening being so near, and I yet believe this to be a condition which favors this result. It occurs to me, however, since my acquaintance with these parasites, that they were also more easily removed from the hive when it was thus arranged. I have examined the dust which dropped from the cluster through this opening, lodging upon the top of the hive, beneath when in winter quarters, and in nearly every case I find these insects.

It has been found to conduce to successful wintering, to place a rim under each hive, raising it a short distance from the bottom board. In this case, the insects in the dust would be farther from the cluster of bees and less likely to annoy them.

It is quite probable that at least some of these varieties came to us with the introduction of the Italians, and while their presence is evidently harmful to us, I am very much inclined to the belief that in some form, they have, in many cases, removed the greatest curse to American bee-keepers, viz: foul brood. It has ever been a mystery how this plague was so suddenly overcome, and I can in no way account for it so satisfactorily as that it was caused by a parasite feeding upon the brood in a certain stage; and that its destroyer, in the form of another parasite, has overtaken it in turn. This is corroborated by our experience with cabbage and currant worms, potato bugs and other pests, which in a few seasons of unchecked devastation, are overtaken by their enemies, and their ravages cut short, in a sensible degree.

To what extent these pests are to affect our pursuits, is yet to be determined. If this paper shall induce others to assist in investigating the subject, and report the results for the advancement of our science, the end for which it is intended will be accomplished. L. C. ROOT.

How to Prevent Swarming.

READ BEFORE THE VT. ASSOCIATION.

It is well known that bees that do not swarm will store much more honey in boxes than they would if they threw off a swarm or two, for the reason that they are so reduced in numbers that it takes nearly all that the few remaining workers can do to furnish honey enough to feed the young bees that are hatching so fast at that season of the year. Should they gather more than the young consume, they have plenty of room in the brood comb, made vacant by the hatching bees, to store all the surplus—for a time at least, —when if they had not swarmed the queen would quickly deposit eggs in the cells made vacant by the hatching bees; therefore they would then be obliged to store their honey in boxes. It will readily be seen, then, that it is very important for the honey *producer* that he should prevent swarming as much as possible. Now how can this be done? It has always seemed to me like working against nature to try to prevent swarming. But then I have noticed that some colonies do not swarm, and they are the ones that make the most box-honey, and at the same time everything in the brood chamber seem to be in good order. Now if they were not working contrary to nature, why not other colonies be prevented from swarming if they are placed in the same condition? In the first place we should breed from non-swarming strains. I think this is a very essential point; in fact it almost wholly depends upon the queen, at least I am satisfied that it does.

I mentioned in my paper last May of having a strain of unswarming queens. I experimented a great deal last season with these queens and not one of them swarmed. and they stored more in boxes than any other strain I had, and I had three others.

These three strains did all the swarming. One strain in particular wanted to swarm all the time in spite of all I could do. I thought these must have been aware of the late Horace Greeley's advice to young men to emigrate West. But in this case it was the old lady that wished to emigrate.

Therefore, I think I can safely say that there is a great difference in strains of bees about swarming. Why should there not be as much difference in bees as there are in different families of hens? We know that there are certain strains of hens whose propensities for setting are much less than others. I think, therefore, if we breed our queens properly this point can be attained.

I will tell you how I managed last season. I do not mention it with any idea of boasting, as it was wholly an accident with me. I was working for something else, when I noticed. later in the season, that my work paid me two-fold. I was not working to prevent swarming. Really if any one had asked me at the time if I was trying to prevent swarming, I should have told them I was not,—that it would induce them to swarm early. Nor do I know that it *will* prevent swarming every time, but I think with good queens it will be a great help.

My object in writing this is to have others try it another season and report the result. It is this. In the spring as soon as it is settled weather and the colonies will bear it, say the last half of May, when young bees are hatching fast and the queens are laying abundantly, go to every hive and examine the condition of each, and all that are in condition to admit of it, spread the brood—that is, separate the combs from the center of the brood nest and insert an empty comb in the space made vacant by the separation of the brood. Great care should be taken in this work not to over do it, as a little too much spreading of the brood, especially in cold weather, would be very injurious. If they have no honey near the brood-nest a comb containing honey and pollen should be placed near them so that they will not be obliged to travel over cold combs in order to reach their stores. This should be done as often as the condition of the colony and the weather will permit. The reason for so doing is two-fold. First by so doing the queen is not obliged to go outside of the cluster to find empty comb to deposit her eggs in. In this way we can help our bees a great deal. and they will increase much faster than they would if we left them alone entirely. This should be repeated as often as once or twice a week if the weather is warm and pollen is coming in abundantly. Second, by managing in this way we will have very strong swarms early, which is very essential to secure a large crop of honey.

Now why should this mode of management prevent swarming? I reason thus: By having every comb in the hive filled with brood early.—before the honey season commences, as well as before the bees have the swarming fever, as it is called. There will be hundreds of young bees hatching daily, consequently there will be hundreds of cells vacated daily. Therefore making room for the queen to deposit eggs, and keeping her busy all the time they will have no occasion for swarming. You will perhaps say that the hive will soon become so crowded by this abundant hatching that the bees will be obliged to swarm for want of room. This would be the case, perhaps, with the careless bee-keeper. But if on the other hand he has been on the alert, up and doing, with a thorough knowledge of the inside of his hives and the requirements thereof, he will have had his boxes on before this, thus making room for the surplus bees and leaving the brood nest with no more bees than is required there. This should be done before they get the swarming fever (that is box-room should be given them), because after they once get the swarming fever no amount of room would prevent their swarming.

Now in case the combs should become too full of brood, or if the brood should not hatch fast enough to give the queens sufficient room, a card of eggs and larvæ, can be taken out and used in other hives that need it and an empty comb put in place of it, thus giving the queen more room. I say a card of eggs and larvæ, not a card of hatching brood, as it has been customary with me, and, as I know, with many others, because by leaving the hatching brood they are continually making room for the queen to lay in. None of my colonies, that were managed in this way last year, swarmed or offered to swarm.

In conclusion, therefore, I will say, rear your queens from the best strains and give them room in proportion to their productiveness. By so doing I *think* swarming can be prevented and a large crop of honey secured when the season favors.

A. E. Manum.

North-Western Ohio Convention.

The Association met at Napoleon, O., April 4. A. Fahnestock, of Toledo, in the Chair. The Chair called for essays on the different subjects announced at the previous meeting.

Mr. Williams had prepared no essay—feared his views, if given in full, might subject him to much criticism, as most all bee-keepers have their own standard of the purity and method of rearing Italian queens, and thought that bee-keepers would generally meet with less disappoinment if they would procure imported Italian queens of some responsible or well-known importer, and rear queens for their own use.

Mr. Clinton spoke on the subjects of introducing queens, uniting stocks, exchanging places of stocks, to strengthen the weaker ones, &c. To introduce a queen, he would spray the queenless colony as well as the queen to be introduced with highly scented, sweetened water, at or near sundown, and turn the queen loose among the bees. To unite a queenless colony with one having a queen, he would place the colony having the queen in the lower story of a hive, and the one to be united in the upper story and placed directly over the other, at or after sundown, as bees never fight at that time of day; all will unite peaceably by the next morning. Had shifted weak colonies into places occupied by strong colonies, thereby strengthening the weaker colonies, but did not think it safe, except during a good flow of honey.

A short essay on honey plants was read by Mr. Kepler, in which the writer claimed that some plants secreted honey of such inferior quality that bees will not winter on it, and advised bee-keepers to reject such honey for wintering purposes.

Mr. Rasey said he did not believe God created bees with instincts that would cause them to gather unwholesome honey.

Mr. Williams.—It is well known that bees gather cider from half-rotten, bruised and fermenting apples, in seasons of scarcity, and that bees never winter.well when allowed to go into winter quarters with such stores.

A. Fahnestock read address on marketing honey which will be sent for next Journal.

Moved that a committee be appointed to examine and prepare a report on apiarian implements. which was carried. The Chair appointed Capt. Williams, R. Rakestraw and D. Kepler a committee.

While the committee were examining and preparing their report, a communication was read from D. Fink, Esq., of Arcade farms, commendatory of bee-culture as an elevating and important pursuit.

The report of the committee on apiarian implements was read by Mr. Williams, as follows :

Your committee, after carefully examining the implements of the apiary on exhibition, beg leave to report as follows :

1. We believe the machine invented by W. D. Parker, of Defiance, O., for cutting and dovetailing, and setting up Sectional Honey Boxes, to be a valuable aid to the bee-keeper, making a box equal, if not superior to any other, and greatly cheapening their manufacture.
2. That the honey extractor, made by Mr. Everett, of Toledo, to be equal, if not superior to any machine now before the bee-keeping public, and sold at little more than half the price of any other good machine.
3. Root's Shipping Crate is worthy of adoption, and his wood and metal cornered frames, as well as his Shipping Cages, are most useful of their kinds.

W. F. WILLIAMS,
K. RAKESTRAW, } *Com.*
DAVID KEPLER.

Moved by Mr. Williams that a vote of thanks be accorded Mr. Fahnestock for furnishing the Society, at his own expense, the many apiarian implements exhibited by him. Carried.

The Association proceeded to elect its officers for the ensuing year. On motion, the rules were suspended, and the following were elected by acclamation :

President.—W. F. Williams.
Vice President.—A. Fahnestock.
Treasurer.—T. B. Hayes.
Secretary.—Daniel Kepler.
Cor. Secretary.—S. L. Curtis.

Moved by Mr. Williams that the Secretary and the Corresponding Secretary be instructed to make out a synoptical report, especially concerning the new machine for making section boxes and the new extractor on exhibition, and forward the same for publication. The organization then adjourned to meet at Liberty Center on the 2nd Thursday in July.

S. L. Curtis, *Sec'y.*

Bremer County (Iowa) Convention.

At a bee-keepers' meeting held at Waverly, Saturday, March 16, Thomas Lashbrook in the chair—after some discussion upon the subject of continuing the organization, it was unanimously decided tn the affirmative.

Accordingly the following officers were elected for the ensuing year; Chas. McCormack, Chairman; Thos. Lashbrook, Vice Chairman; David Clark, Sec'y; and D. H. Bush, Treasurer.

Charles McCormack, Thomas Lashbrook and David Clark, were appointed a committee to draft a constitution and by-laws, to be submitted at the next meeting, to be held the last Saturday in May.

It was decided to have three regular annual meetings as follows: Last Saturday in Feb., last Saturday in May, and last Saturday in October,

Mr. McCormack gave some useful hints upon the subject of bee-hives, stating that he used the "Gallop Hive," which he thinks possesses some advantages over others. That by the use of this hive in what he called an extensive form, weak swarms could be thrown together and save them. The past few years have demonstrated the fact that "Bee-keeping" can be made profitable in this part of Iowa.

Meeting adjourned to last Saturday in May, to which meeting are all interested in this subject are cordially invited to be present.

Michigan Convention.

The semi-annual meeting of the Michigan Bee-keepers' Association convened at East Saginaw, April 10.

President A. B. Cheney, of Sparta Center, called the meeting to order, and read a letter from the Secretary, W. L. Porter, sending in his resignation, on account of ill health. Prof. Cook nominated Hon. Conrad Fey, of East Saginaw, who was unanimously elected to fill the vacancy. Prof. A. J. Cook, Dr. L. C. Whiting and T. F. Bingham were appointed a committee of arrangements. While the committee was out Secretary Fey introduced Mayor Thomson, who briefly addressed and welcomed the Association to the Valley.

BURYING BEES IN WINTER.

Prof. Cook said that at the Agricultural College some colonies of bees had been destroyed by mice, and he would advise means to prevent mice from getting at the hives. He recommended protecting the openings with perforated tin; said he thought well of burying bees, leaving an opening at the top filled with straw for ventilation. They should be buried in sand with good draining. It is not an expensive way of protection. He had tried it several seasons, and found that they consumed less honey than those that were not protected.

T. F. Bingham said the main thing was the depth at which they were buried, and thought they should be placed entirely under the ground, so the temperature should be as uniform as possible during the whole winter.

Mr. Fey said he had kept bees since he was a boy, and in only one or two instances had he been troubled with mice, and he thought the weather had much to do with wintering. Some seasons they would do better buried, and some they would do better above ground. He had built a bee house. One winter he lost some 90 colonies in his house, but he thought the cause was damp, wet weather. He thought ventilation had more to do with keeping bees than most people supposed.

Mr. Hetherington said he had no trouble with mice; thought it was impracticable to bury bees here in the Valley—the ground being so level. He packed with straw, and had good success, losing very few. Sometimes he had covered with snow when it was deep; had some colonies dwindle that were kept in the cellar, and usually did not do well when housed in cellars or bee houses.

Dr. Whiting said that if bees were kept dry and had good food, they would take care of themselves, whether it was warm or cold, and give examples where they had wintered well when they were blocked up 1 or 2 inches above the board, and especially in cold weather; also in houses and in cellars, and packed in straw, and the first had wintered the best of all.

T. F. Bingham said he built a house with lumber, filled with hay, well packed; also packed under and over the hives with the same material, having space for his bees to come out, and had been very successful with his bees the past winter, but the weather had been so warm that he did not consider it a fair test.

J. P. Allison said his bees were in an open shed, about 20 inches from the ground, and he spread some hay in front of them on the snow. When the bees came out, on warm days, they fell on the hay, and would get up and go back. He gave them plenty of air. He lost 16 colonies the winter after the fires of 1871, but thought it was on account of the fires in the fall and not the cold weather.

Mr. Walter had buried in snow and lost most of them when only partially buried, but when wholly buried they had wintered safely.

Peter Leasia, of Bridgeport, said he had lost several colonies when there was plenty of honey left, and could see no reason, except it was for want of place to breed; thought they wanted plenty of air, and if well ventilated would winter well in all ordinary seasons.

President Chapin said he had built a house with double walls, filled with sawdust, and had lost from 10 to 25 per cent., but could not say it was the house, as there was a cider mill close by, and it might be the effects of that. Had tried open air one winter and lost all he had; was now trying the cellar, and thought well of it, so far; but could not tell how long it would be successful. He thought to winter bees successfully, first, we should have a perfectly dry place; and, second, he thought if ventilation was given, there would be no trouble.

Prof. Cook said that sometimes bees may gather too much honey in the fall and not leave room for brood, as he had reason to know, especially when the season was propitious.

The President then appointed the following committee on bee apparatus: Prof. A. J. Cook, O. J. Hetherington and Byron Walker.

HOW SHALL WE INCREASE OUR COLONIES ?

Dr. Whiting.—The process I have adopted is to get queens fertilized and laying, then transfer combs from old hives to an empty one and fill up with brood, bees and queen, and change their location, thus preventing swarming, and thus keep on increasing.

Mr. Walker agreed with the Doctor.

Prof. Cook does not believe in following the old style, but follows his own way, and to prevent swarming, clips the wings of the queen; then, if the swarm issues, catch the queen, put a new hive in the place of the old one, and when the swarm returns they will enter the hive. Then put the queen in and they are all right.

President Cheney was of the opinion that to increase stocks, the cheapest way would be to purchase colonies in common box hives and transfer them into the movable comb hives. This would be cheaper than to raise queens.

Mr. Bingham has a novel way of increasing. When the bees have filled the hive, place an empty set of combs above. Being all prepared for eggs, the queen then enters the above, and will be laying her eggs in a short time, and swarms his bees about 3 days before a heavy run of honey occurs.—After this, when all the combs are full of brood and honey, take off the top and move to some new place, and thus make two swarms; keeping on increasing, following the same rule with all others.

ADVANTAGES OF COMB FOUNDATION.

Mr. Bingham read an article from the BEE JOURNAL of May, 1876, wherein he opposed strongly the comb foundation, claiming that the natural comb gives the honey a good flavor, which comb foundation will not.

Dr. Whiting favored the use of comb foundation for brood combs, but not for surplus honey.

President Cheney favored the use of comb foundation for brood combs.

Mr. Hetherington favored comb foundation, claiming that bees would get a better start, and the queen would lay eggs sooner, but does not favor its use for surplus honey.

Prof. Cook offers the following, which was adopted:

Resolved, That while we recognize the great value of comb foundation for the use in the brood chamber and strongly recommend such use, we as stoutly disclaim against its use in boxes or sections.

The committee appointed on statistics for honey production for the year 1878 reported as follows:

Your committee appointed to recommend some plan for obtaining statistics relating to the production of honey in the State of Michigan during the present year, would respectfully recommend that there be a committee appointed, who shall, during the present session, prepare a circular letter, containing a succinct statement of the object desired, and also such questions as will elicit the desired information; that the secretary be requested to transmit a copy of this circular letter to every bee-keeper in the State, whose address he can secure, and request that the answers be filled and returned to him; (this should be done soon after the honey harvest), the returns to be properly abstracted by the Secretary and submitted to the Association at the next annual meeting. The committee on circular were the President and Secretary.

The above was received and adopted.

THE EXTRACTOR.

Mr. Bingham said the extractor was for separating the honey from the comb, that the latter might be used again, saving the bees much hard labor, also leaving the honey much nicer for market than the old way of straining honey.

Mr. Whiting only used the extractor to make room for brood.

Prof. Cook preferred the extractor to be all metal, and as light as possible, on account of cleanliness; would extract all the season if he could get 12½ cts. per lb., rather than produce comb honey. He would not leave too much honey in the fall for the use of the bees during the winter, but would rather sell it; would extract before the bees evaporate it; it is just as healthy as when thick, as he had had ample chance to test it at the College with the students.

O. J. Hetherington agreed with Prof. Cook; would rather use wire, half an inch apart than wire cloth; had no trouble with regard to injuring the young brood.

Dr. Whiting used an extractor with space for 4 combs; could extract 4 combs as fast as 2; liked large cans with large space under the cylinder.

Prof. Cook had observed the effect on the young larvæ, and had seen no injurious effects with the extractor, if properly used.

Prof. Chapin said he had used several kinds of extractors; liked large space under the cylinder; liked Mr. Everett's on this account; took some exception to Prof. Cook's remarks about thin or ripened honey. Would rather have bees finish their work, and then would extract and sell all, if 12½ cts. per pound could be obtained. We should try and create a demand for this product, especially for health, if nothing else.

Mr. Bingham said the extractor is the most useful thing in the apiary; without regard to price, thought it indispensable.

Prof. Cook would not sell thin honey, but would extract it while thin and put in a dry, warm room to evaporate and properly ripen.

Mr. Walker agreed with the President in regard to thin honey; thought there was danger in putting poor honey on the market, and there was very little difference in the cost.

Mr. Bingham gave Mr. Langstroth's experience, which agreed with Prof. Cook.

SHALL WE PROCURE ITALIANS?

Dr. Whiting said he used this breed on account of ease in handling; thought the blacks would give more honey, but were not so easy to handle.

Mr. Hetherington thought more honey could be obtained from other breeds.

Mr. Walker said they would not go into boxes readily, unless some means were used to compel them to do so.

Prof. Cook favored the breed very much; thought with good care, favorable results could be obtained, and if much pains were taken in this way, better results would be obtained.

SHALL WE USE BOXES OR SECTIONS?

Prof. Cook would use sections as giving better results, both as to honey and market.

J. P. Allison would use small boxes or packages, either boxes or sections, as they would sell better than large packages.

Mr. Wellington agreed with the above; we should be governed by the market.

Mr. Whiting liked sections best, on account of sale; merchants would buy them because they were not worth so much, and would sell readily.

Mr. Walker liked boxes best, as he

thought he could get more honey in them.

President Cheney preferred small packages for market; favored mostly 1 pound sections, but thought some larger ones might be advisable; thought as much honey could be obtained as by the old way; would not give too much room; good results can be obtained in this way.

HOME CONSUMPTION OF OUR HONEY.

Mr. Allison said one of his neighbors was in favor of this, as he consumed all his honey.

Mr. Rouse said he would be in favor of home consumption and a uniform price agreed upon, among producers.

Mr. Walker found universal prejudice against extracted honey; we should encourage the market in every way we can.

Mr. Bingham could sell all of his honey at home, but he sold at the rate of 11 lbs. for $1, and at these rates he had no trouble to sell what he produced; and if we would make it an inducement to people to buy in quantities, there would be no trouble. We should educate the tastes of the people, and they would not buy so much cheap syrup.

Mr. Whiting said he had sold extracted honey to the poor, in place of syrups, to a considerable extent, and he expected the demand would increase each year.

Prof. Cook said that extracted honey was preferred by the students at the college, which he considered a good test; also the same at the groceries in the village of Lansing, but he put it up in small packages. It should be put up in small, neat packages, and it will sell readily, after people have tried it once and found what the quality is.

Mr. Hetherington offered the following, which was carried unanimously:

WHEREAS, We recognize any real invention and improvement in implements and methods of management of the apiary, as a source of all our real advancement in apiculture. Therefore, we, the bee-keepers of Michigan, recognizing the mutual and wide-spread benefit derived from inventions and improvements, recommend that he who shall place within our reach any improvement or real invention shall receive our hearty co-operation, and the undivided recognition and honor due for such service.—Therefore

Resolved, That we observe with heartfelt sorrow the course pursued by parties, who, in their efforts to control the manufacture and sale of the inventions of others, without their consent, or the recognition of their rights, discourage invention, and worthy and valuable zeal in the production of improvements and methods alike valuable to us all.

Resolved, That while we heartily extend the hand of fellowship and every consideration of honor to the inventor of any valuable method or improvement, we do most emphatically condemn, as detrimental to our mutual interests as bee-keepers, the production of implements embodying the inventions of others, except with due credit, and the production of a superior article or implement; that we do not regard the mere production of an article—the successful workings of which are due entirely to another invention—as an improvement, but merely as an evasion, unless such change shall, of itself, render more practical and convenient the original inventor's machine.

Prof. Cook said that we, as an association, should sustain all worthy inventions.—It costs as much to sell an invention, generally, as it does to manufacture it, unless it should be so worthy as to be indispensable to those using the invention.

Dr. Whiting favored the above heartily.

President Cheney favored it, but thought we should be cautious in trying many new inventions.

The afternoon session was opened by the President, as Chairman of the Committee on Statistics for 1878, reading a circular letter, to be addressed to bee-keepers to fill out and return to the Secretary, asking a series of questions in regard to matters pertaining to the subject.

WHAT KIND OF HIVE SHALL WE USE AND WHAT FRAME?

President Cheney said it did not make much difference what kind of hive or frame we had, provided we used only one kind; the same amount of honey could be produced. Each kind should have a style of management peculiar to itself, and should be a special study.

Mr. Fey said he had used several kinds.—In box hives you could not detect the loss of the queen as soon as in others. For wintering, he thought it the best.

The Committee on Apparatus made the following report, which was received and adopted:

MR. PRESIDENT:—Your committee feel somewhat embarrassed in reporting upon the large and interesting assortment of apparatus on exhibition, as our duty to bee-keepers requires that we shall speak disapprovingly of some of the implements submitted for inspection. We first examined smokers, of which there were 3 on exhibition, the Bingham, the Quinby and the A. I. Root. We give our unqualified recommendation to the Bingham smoker. Two of the committee who have used all of the 3 smokers think that in view of the superiority, the additional price is no objection to this smoker.

The Bingham hive is remarkable for its shallow frames, great simplicity and adaptability to the securing of comb honey. We should not expect that the hive would be salable, and should fear, from the shallow brood-chamber, that the queen might give trouble by entering the sections.

The Quinby improved hive is also very simple, quickly manipulated, and for the large space for surplus comb is very commendable.

The similar Russell hive is in every way inferior to the Quinby.

The Concord hive is a malformed Langstroth, which, from its complexity and waste room, is not to be commended.

The Langstroth hive, exhibited by Dr. Whiting, is essentially a Langstroth hive, and so needs no commendation.

The hive exhibited by John Coates is the same in form and principle as the hive disseminated a few years ago by Dr. Conklin, and has been generally discarded by all who tried it.

The only extractor on exhibition is one from Mr. B. O. Everett, of Toledo, Ohio. This is the Root machine improved. Your committee think they have seen no better. They are specially pleased with the deep can, the attached baskets for pieces of comb, and the unprecedented cheap price of $7.00.

There are several fine honey section crates on exhibition; one very fine one from O. J. Hetherington, one excellent one from Dr. Whiting, also one on the Concord hive.

There are 2 fine shipping crates; one from H. M. Bradley, of Bay City; the other from Cyula Linswick, of Farwell.

The sections are almost innumerable. Sections very neatly dovetailed and in the Langstroth frame, from Messrs. Sayles, of Hartford, Wisconsin; others of same style from G. B. Lewis, Watertown, Wisconsin; from Willis D. Parker, Defiance, Ohio; A. I. Root, of Medina, Ohio, and E. J. Scofield, of Nashua, Iowa. Nailed sections—very neat—are exhibited by Mr. Bradley, and from Mr. Alley, of Massachusetts. Mr. Hetherington exhibits his neat section, put together with glue and grooves. From the Agricultural College are sections, veneer sections, foundations, blocks, one for fastening foundation, and one for making true frames, and one Gallup frame, prepared to receive foundation.

A. J. COOK,
O. J. HETHERINGTON,
BYRON WALKER.

Prof. Cook made a motion that the next meeting be at Grand Rapids, on the 4th and 5th of December, 1878. Carried.

Secretary Fey presented his resignation, which was accepted, and T. F. Bingham, of Allegan county, was elected Secretary.

On motion of Dr. Whiting it was *Resolved*, That the essentials requisite for a bee-keeper is a good hive, (either a Quimby or a Langstroth), a good swarm of bees, a Bingham smoker, section boxes, a good extractor, a good market and a good operator.

Mr. Bingham, Chairman of the Committee on Resolutions, made the following report, which was accepted :

WHEREAS, The citizens of East Saginaw, through their generous and patriotic Mayor, who so kindly welcomed the Michigan Bee-keepers' Association, and kindly tendered the Council Chamber for their deliberations, and the hospitality of the city, we tender them our grateful thanks, and assure them that their kindness and hospitality will ever associate with the beautiful and thriving city of East Saginaw the most pleasant recollections.

Resolved, That we tender to the city and citizens of East Saginaw, and especially Dr. Whiting, our most sincere and heartfelt thanks for their generous hospitality and kind consideration.

Resolved, That we tender to our accomplished and faithful President, who has presided with such delight to us all, our great appreciation of his services, and extend to him our sincere thanks.

T. F. BINGHAM,
J. H. WELLINGTON,
B. O. EVERETT.

The Association adjourned to meet at Grand Rapids on Dec. 4, 1878.

[We waited as long as possible for the Official Proceedings of this Convention ; and then set up the above from the Saginaw *Republican*. Just as we go to press, the President has sent us an official copy, stating that his other duties had prevented him from being able to send it earlier. The Secretary, being unable to be present at several of the sessions, and afterwards resigning, prevented a full report. President Cheney's Report is essentially the same as the above, corrected from memory. —ED.]

◆

Western Illinois Convention.

The Western Illinois Bee-Keepers' Society will meet at Burlington, Iowa, Tuesday and Wednesday, May 7th and 8th, 1878.

You are hereby cordially invited to attend our Convention, and bring with you anything you think will be of interest to bee-keepers, such as hives, extractors, smokers, boxes, honey-knives, bee-veils, honey, tools, etc. What may seem *old* to you, may be *new* and of interest to others. Reduced rates will be given at hotels. Meeting will commence at 10 A. M.

PRIZES.—*Nine Prizes* will be given away to *members present* at this meeting, which are as follows:

1st.—Full stock Italian Bees with Imported Queen.
2d.—An Imported Queen.
3d.—An Imported Queen.
4th.—Queen bred from an Imported Cyprian Queen
5th.—A Tested Italian Queen.
6th.—A Dollar Queen.
7th.—One dozen "Sweet Home" Raspberry Plants.
8th.—One plant each of the following named Raspberry Plants: Doolittle, Mammoth Cluster, Golden Thornless, Seneca, Miami, Ganargua, Brandywine, Philadelphia, Lumb's Ever-bearing, and Brinkley's Orange.
9th.—A double-portico Langstroth Hive complete, with cap covering both porticos, honey-board, full set of section honey-boxes, with shipping-crate for the same.

Thos. G. Newman, editor of *The American Bee Journal*, will deliver a public lecture on "Honey."

Membership fee, 50 cents ; ladies free.

Notice the change in time of meeting.

D. D. PALMER, *Pres't*,
Eliza, Mercer Co., Ill.

WILL M. KELLOGG, *Sec'y*,
Oneida, Knox Co., Ill., and Oquawka, Ill.

American Bee Journal.

TERMS OF SUBSCRIPTION.

Single subscription, one year	$2 00
Two subscriptions, sent at the same time	3 50
Three " " " "	5 00
Six " " " "	9 00

All larger clubs at the same rate.

RATES FOR ADVERTISING.

1 month per line, of Agate type	20 cents.
2 " " "	15 "
3 " " "	12 "
6 " " "	10 "

Fourteen Lines make one inch in Length of Column.

No advertisement received for less than $1.00.

Cash in advance for all transient advertisements. Bills of ragular advertisers payable quarterly. We adhere strictly to our printed rates.

Address all communications and remittances to

THOMAS G. NEWMAN & SON,
974 West Madison St. CHICAGO, ILL.

TO CORRESPONDENTS.

When changing a post-office address, mention the *old* address as well as the new one.

We send the JOURNAL until an order for discontinuance is received at this office, and arrearages are all paid.

We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

We do not send goods by C. O. D., unless sufficient money is sent with the order to pay express charges both ways.

When ordering Extractors, give outside dimensions of frame or frames to be used, length of top-bar, width and depth of frame just under top-bar.

In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additions can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, made payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. Premium Queens will in every case be tested.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce, Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send us any small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

"HOT HONEY."—Friend R. Corbett remarks that his cure for "hot honey" is as follows: "Boil it, taking off the scum, and put it into a bright pan or kettle. This will not change its color, but will render it palatable and it will not disagree with the most delicate stomach."

☞ A "Chip from Sweet Home," not of the usual kind—*i. e.* a letter—made its debut at friend Palmer's on the 19th. It was welcome, however, and did not distract his attention from his 196 colonies of bees, which he reports in good condition, and ready for the bountiful harvest now so promising.

☞ Our pamphlet on "Honey as Food and Medicine" was issued about the 10th of April. It received a hearty welcome, and orders for it has been coming in quite freely. We append a *few* much abbreviated indorsements of it—as samples of the many—our space forbidding the insertion of all:

"Excellent; well gotten up."—W. P. Henderson, Murfreesborough, Tenn.

"It is truly excellent; I shall try to get up a club of the bee-keepers of this vicinity to send for a quantity for distribution."—Frances A. Dunham, DePere, Wis.

"Pamphlet on Honey received—most valuable to large Honey producers; you ought to dispose of many thousands of them."—J. M. Shuck, Des Monies, Iowa.

"Your pamphlet on Honey is a step in the right direction."—H. F. Walton, Woodman, Ill.

"Honey pamphlet is received; send me 250 of them; I would like to have it printed in German; I shall want more of them soon."—F. Claussen, Mishicot, Wis.

☞ A beginner asks, "If I buy a North Star Hive, which is a patent, I believe, have I a right to use it, and if I sell bees in it, has the purchaser a right to use it?"—Certainly; Sperry & Chandler say that they reserve only the right to make them. Any one who has purchased of them can use it, and if they dispose of it, the buyer has exactly the same right to use and sell, &c.

☞ Friend Bingham has contracted for a "Corner" in our Business Department. In this he intends to put Gleanings on the Smoker question, from time to time. He says he has piles of interesting letters that should be printed—hence, he has purchased a "Corner" in the AMERICAN BEE JOURNAL for their insertion.

☞ We keep Prize Boxes and Crates in stock at this office, and can supply orders, without delay, lower than the lumber for a small quantity can be bought for, in the country. See prices on last page of cover.

Honey Markets.

NEW YORK.—We quote as follows:

There is no change in the condition of the market during the past month, and prices are still quotable as follows:

Buckwheat Honey—comb	8 to 12c
Strained or extracted	8 to 10c
Clover—in comb	15 to 25c
" extra	8 to 12c

H. K. & F. B. THURBER & Co.

CHICAGO.—We quote as follows:

HONEY.—The current quotations for good to choice comb, are ranging at 11 to 12c. ℔ lb; common and dark colored lots at 8 to 10c. and choice extracted honey at 8 to 10c.

BEESWAX.—In fair request at 24 to 26c. per lb. for prime choice yellow.

CINCINNATI.—Quotations by C. F. Muth. Comb honey, in small boxes, 15@20c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz., $4.50; per gross, $50.00.

LOUISVILLE.—Quotations by B. B. Barnum.—I will pay for choice, light, extracted honey 8@10c.; for white comb 12½@15c., in small boxes.

CALIFORNIA.—Everything looks well for the coming crop of honey to be large and of fine quality. It will be a little late; that in San Diego Co. will come about June 1st. Stock here is mostly from the crop of 1876. Holders of all kinds want to unload.—We quote: Comb, white, 12½c. @ 15c. Dark to medium, 10c. @ 12c. Extracted, dark, 6c. and 9c. Choice, best, 10c. and 12c. Beeswax, 29c. and 31c.
STEARNS & SMITH, 423 Front St., San Francisco, Cal.

☞ Several offers of interests in Patent Rights and inventions of bee-appliances, have been offered to us, very kindly, of late, but we have declined them because we think THE JOURNAL should be independent, and not be in any way interested in such matters. Of course we thank our friends for their kind offers—but we shall steadly decline *all* such, and make this notice to all, that we have fully determined *not* to accept any such, under any circumstances; so none should feel hard at our refusal. The JOURNAL must continue to be subservient to no party, clique or patent interest, as long as we have control of it. It is to the interest of *all* that it should be so.

☞ In reference to the "Concord Hive" that was exhibited at the Michigan Convention—the manufacturers, Kraetzer Brothers & Stauber, desire to say, that it was one of the first that they made. One of Mr. Stauber's workmen was ordered to ship a hive, and by mistake he got down an old one from the loft and shipped it, instead of one of their new style.

CATNIP SEED should be sown very thick, in March, on good garden soil. Plants blossom the first season, but it requires two years to give them full bloom. In the fall, cover the plants slightly with rubbish, to prevent the frost from throwing them out of the ground. In the spring, set the plants out 3½ ft. apart each way, and cultivate like corn. Two years ago, in many localities, all sources of honey failed but Catnip. Those who wish to sow this honey-producing seed should procure and sow it at once. We can supply a few pounds at $2 per ℔.

THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, JUNE, 1878. No. 6.

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Editor's Table.

☞ Some one, by mistake, carried off the U. S. Mail hat of E. D. Godfrey, Red Oak, Iowa, while at the Convention at Burlington, Iowa. The one who found it in his possession should write friend Godfrey—address as above.

☞ New York city folks have the bee fever, and a great many hives are being sold there. Friend King keeps a lot of colonies on the roof of his office, from which he makes daily sales. The Thurbers have also disposed of several consignments at a price ranging from $10 to $12 each.

☞ The past month has been very discouraging to bee-keepers all over the country. It has been universally cold and wet. If it clears off and becomes warm now, all will be well. If not, we fear the honey harvest will suffer considerably. The weather has retarded queen rearing, and as the pleasant and promising weather of April caused orders for queens to rush in very fast, almost all queen breeders are behind with their orders—and purchasers must have patience with them. The latter can no more control the weather while rearing queens than can the former while trying to produce honey. We must all ercise *patience* now.

Prof. Cook's New Manual.

This work is now out, and all orders, heretofore sent us, are filled. Should we have made any mistake, or failed to send as ordered, we shall be glad to make amends if informed of the fact. Being a great undertaking, many delays have occurred, even where least expected; but we feel sure all such will be overlooked when the book, so neat and elegant, is received. Just as we go to press, the following Review from that ripe scholar and critical observer—the Rev. O. Clute, of Keokuk, Iowa, comes to hand, and we give it in its entirety:

When Prof. Cook's first "Manual of the Apiary" appeared it supplied a want which had been felt for some time among our bee-keepers. The old standard works of Mr. Langstroth and Mr. Quinby did not, of course, deal with the apparatus and the methods that have been invented or discovered since they were written. So *many* new and valuable things have been invented for the use of the bee-keeper, and so many improved methods have come into practice, that a work which should treat of these clearly and briefly was much needed. This need Prof. Cook's small Manual, to a large extent, supplied. That the Manual was appreciated is fully shown by the fact that so large a number of copies were sold. Practical bee-keepers, too, have generally commended it as a valuable addition to the literature of bee-keeping. It was impossible, however, in the compass of so small a work, to treat the subject fully. Some important points were presented very briefly, other points, nearly as important, were scarcely mentioned at all. Doubtless, it was the desire to remedy these defects that led Prof. Cook to revise and enlarge his work in this second edition. It now comes before us "revised, enlarged, mostly rewritten, and beautifully illustrated."

As we read the book, it is plain that it has been written out of the author's enthusiasm for a pursuit which for many years has given him much pleasure. There is a certain warmth in many of the sentences, now and then rising to intensity, which indicates a glow in the writer which could have been roused only by a real devotion to the work. Enthusiasm always gives an attractive flavor to conversation. It is equally attractive and desirable in books.—The writer, whose words are warmed by his own earnestness, is sure to rouse an interest in his readers. It is safe to say that but few who read Prof. Cook's book will lay it down without desiring to own a few colonies of bees for recreation; probably, many readers will desire to engage in it as a regular calling, hoping to achieve a success as gratifying as that of Mr. Doolittle, Capt. Hetherington, or Mr. Harbison. Prof. Cook's enthusiasm is not that of a tyro.—He has kept bees for years. He has experienced failures as well as successes. The failures have only set him at work to learn the causes of failure. Year by year, through success and failure, he has come to wide experience and accurate, practical knowledge, which appear on every page of this work.

In writing a treatise on bee-keeping, this practical experience is essential, but it is not the only essential. Scientific knowledge is also needed; thorough familiarity with the structure and habits of the bee.—It is fortunate, for those of us who are to be helped by his work, that Prof. Cook brings to that work a careful, scientific training, and a special skill in observing the bee, derived from several years of careful labor in making observations of his own. In his second chapter, on the anatomy and physiology of the honey bee, he has, indeed, availed himself of the able labors of his predecessors in this department, but he has also been a student himself, has verified the observations of others and supplemented them in some degree by his own. And in the sixteenth chapter, on honey plants, his scientific knowledge of botany has enabled him to give us a better statement concerning the plants from which the bees collect honey than has been made before by any writer.

Unhappily, practical knowledge and scientific training do not always give to their possessors the skill to write the English language with force and elegance. Of this fact Prof. Cook is, to some extent, an example. The style of this second edition is much better than that of the first, but this is not above criticism. Still, all who have an interest in bee-keeping will be so glad to welcome a practical book that is up with the times that they will willingly overlook an occasional faulty choice of words, or loose construction of sentences. In its practical aspect, Prof. Cook's book is exceedingly valuable. His long experience as a teacher enables him so to present his subject that one who has never kept bees, and who has never visited a practical bee-keeper and seen his methods of work, can, if he has average intelligence, learn the theory from this book with sufficient accuracy to keep bees with success. All the practical operations of the apiary are presented in such way that all persons who have a constructive imagination can, as it were, actually see the work going on before them. This, we take it, is the real object of such a book. Success in this direction comes from the possession of the teaching *faculty*. It is because so many writers do not have this faculty that books intended to aid learners, in various kinds of practical work, fail in accomplishing their purpose. Prof. Cook has the spirit of the teacher. He so approaches his subject, so explains and illustrates it, that the reader is interested and instructed.

The numerous illustrations serve an excellent purpose. A picture of an unfamiliar object will give us instantly a better idea of it than pages of words. The illustrations are usually good, but now and then the artist is at fault; for instance, the queen-cells on page 109 cannot be called a success.

The publishers have done their work well. It is a real pleasure to take up a book that is printed on such fine book paper, with good clear type. The binding, too, is neat, so that the book presents an attractive appearance to the eye. It is a book which does credit to our calling; a book which every bee-keeper may welcome as a fit exponent of the science which gives such pleasure to all who are engaged in it. O. CLUTE.

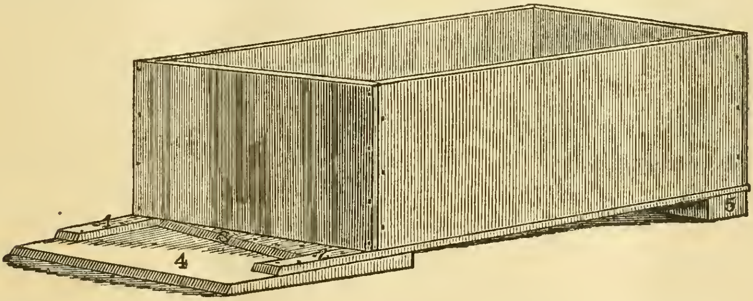
Keokuk, Iowa, 20th May, 1878.

Peculiar Sliding Bottom-Board.

Friend Gordon has sent us the following description of his detached, sliding bottom-board:

It is composed of 5 pieces, viz: *One* central piece, numbered "3" in the drawing; *two* side pieces, numbered "1 and 2;" and *two* battens, numbered "4 and 5;" the fronts of 1, 2, 3 and 4, are beveled back to make the ascent easy; and number 3, (the central piece,) is cut slopingly, beginning on the short side at 18½ inches from rear end, and making it as long on the long side as the piece will allow. Thus you will perceive, *from the length of my hive*, that when the hive is pushed back even with the rear end of bottom board, all entrance to the hive becomes closed; and as you draw the hive forward, the entrance-way gradually enlarges, until, when the hive is drawn forward to the end of the side pieces, you have an entrance-way of 10½x¾ inches. This does away with entrance blocks, and all cuts into body of hive, for purpose of entrance, which I regard as quite objectionable. We have 120 colonies, all doing well. WM. L. GORDON.

Shreveport, La., May 13, 1878.



Detached Sliding Bottom-Board.

Particular reference to the cut and the above description will enable any one to see the design and arrangement. The sizes of the pieces of wood composing it are as follows:

No 1 and 2	pieces,	2½x¾x24	inches.
" 3	"	10½x¾x22	"
" 4	"	8x1¼x15½	"
" 5	"	2x3x15½	"

The moving of the body of the hive to control the entrance, we think quite objectionable. If we did approve of it, we should like friend Gordon's plan better than any other we know of. It is much better than the arrangement recommended for the "simplicity hive," to which we have very serious objections. At all events, friend Gordon is entitled to credit for working out the simple arrangement.

The two slides, as shown on another page, in connection with the new Langstroth hive, for controling the entrance is a much superior arrangement.

☞ California will ship only extracted honey hereafter, the freight and breakage being so much as to make it unprofitable. This leaves the production of comb honey to the Eastern and Middle States. They ask 10 cents per pound for extracted honey in San Francisco, and as it costs 3 cents per pound to bring it to Chicago, that fixes the price, in bulk, at 13 cents here.

FASTENING COMB FOUNDATION.—Friend W. W. Moore has sent us a little model showing the way he fastens comb foundation into the frames. It consists in having the top-bar in two pieces, and when put together it holds the foundation very firmly. Several have been using a similar plan for fastening it, and it works well.

Adams Station, May 15, 1878.

"Will you please state in the next JOURNAL the objections, if any, to hives in which the frames run from side to side, instead of from end to end." THEO. F. C. VANALLEN.

[One of the greatest objections is, that no matter how much you may desire to tip the hive a little to the front, to let water run off, &c., it cannot be done when frames run from side to side. When they run ends to the entrance, all can see that it is much easier for bees to get to any comb desired, without interference from bees from other combs.—ED.]

Honey as Food and Medicine.

It is gratifying to know that our efforts in the direction of increasing the demand for honey, by publishing the little work with the above title, has met with such a hearty endorsement by the honey-producers of the country. The first edition is exhausted, and we shall issue another edition immediately, and at the same time print it also in German, for the use of the German-speaking population of our country, friend Claussen having kindly translated it for that purpose.

The Rev. J. W. Shearer, of New Jersey, in acknowledging its receipt, says:

"To me, its receipt was very timely. We were hunting receipts under the first head and authority under the second. The impetus given sugars by improved refining of modern times, and the strides of medicine from chemical discoveries, have caused honey to be too much overlooked in these lines. We believe honey will gradually recover something of its former standing medicinally, despite new medicines, and become again the favorite among sweets for many uses."

The many congratulatory letters we have received show that such a pamphlet was imperatively demanded. We discovered some imperfections, which will be corrected in the second edition. Our friends who so kindly sent in receipts after the first edition was published, will find them in the second.

Speaking of our lecture on this subject, at Burlington, Iowa, by request of the Western Illinois and Eastern Iowa Beekeepers' Association, the Burlington *Hawkeye* says:

"The meeting in the evening, to listen to the lecture of Mr. T. G. Newman, editor of the American Bee Journal, Chicago, was not as large as it might have been, owing to the slight thunder storm and the threatening aspect of the weather. The audience was well entertained, however, by a fluent and easy speaker, who showed not only great knowledge of his subject, but much enthusiasm in bee culture. His subject, "Honey as Food and Medicine," was treated very gracefully, both in its historical and hygienic aspects. The speaker referred to the ancient history of this delightful viand, showing how profusely it was used in daily life, and even in religious ceremonies, among the foremost nations of antiquity. He then passed to a physical and chemical examination of the nature of honey, and of the different scientific methods of obtaining it in its purity. He then showed its healthfulness as an article of food, and its great superiority over sugars and syrups. Lastly he spoke of it as a medicine, showing its peculiar efficacy in various diseases, espically those of the lungs. The lecture showed a great deal of studious thought. The strict attention which his audience paid to it was evidence of their appreciation of it, as well as of its merit."

Reed City, Mich., May 23, 1878.

"I send you a case of Honey Boxes, which I wish you would examine and comment upon through the columns of the Journal for June, if they reach you in time. I have never seen anything of the kind yet, and so far as I know, the plan is original with me. You will observe that the box is made of *one* piece of timber, 3 mitre slots are cut across the piece, groved for the glass and guide, and then steamed and bent. These boxes are not as *perfect* as I expect to make, my machine not working exactly right yet; but you will get the idea. There is only *one* corner to nail, instead of 4; they are much handier for glassing and putting in separators."

Thomas T. Delzell.

[Yes; this *is* something new, and when the machine is perfected sufficiently to do true and smooth work, it promises to be of value.—Ed.]

Smokers.—Levi Sutliffe, of Charles City, Iowa, has sent us a new smoker, of his invention. It is some 3 or 4 times the size of ordinary smokers, and it is unlike any of them in form, size, springs, revolving curved tube, &c., &c. It works with slow stroke, and will keep ignited for hours.—Being so large, it is rather difficult to handle, especially where one is not used to it. Friend Sutliffe has certainly *not* copied any other smoker. *It* is original.

Friend King has sent us one of his smokers. It is the same size and shape, both of bellows and tube, as the Bingham standard. Its peculiarity, the cut-off slide, makes it work very hard. The connecting parts are the same as the *old* Quinby. It is cheap, but *not* as nicely finished as the Bingham—the price would not admit of it. A cut of it may be seen on advertising page xiii.

We have received a small drawing of a Continuous-blast Smoker. It consists of the ordinary tube and bellows with an elastic rubber bag attached to the bellows to receive the wind and convey it to the tube continuously. We should think it rather awkward, however.

☞ The *Rural New Yorker* comes to us enlarged and otherwise improved. We always welcome it. It is one of our most valuable exchanges. We wish it abundant success.

☞ We have received L. C. Root's new circular for 1878, and J. H. Nellis' new price list. Both are well gotten up and contain valuable information to purchasers of supplies.

Everett's Extractor.—By reference to our advertising columns, it will be seen that friend Everett has found it necessary to advance prices on his Extractor. He has improved it considerably since the first was made, and so had to increase its price. In his Circular and Price List he remarks as follows :

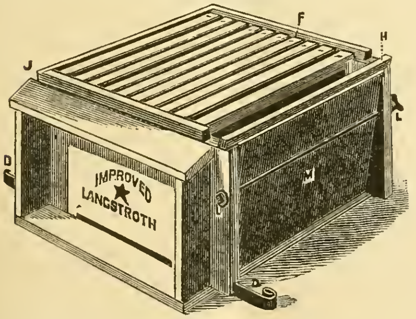
"As I put heavier stock in the cans than I first intended to do, besides making several other valuable improvements, in order to make it a No. 1 machine, which I can warrant in every instance, I was obliged to raise my price a little, and still I claim to have the cheapest Extractor, all things considered."

The little Comb basket will be very convenient to any apiarist. We were well aware that the price was too little, as at first stated, and think friend Everett is fully justified in raising it.

The New Langstroth Hive.

The fact that 80 per cent. of the bee-keepers of the United States are now using or are preparing to use the Langstroth hive, is strong proof that it is the "coming hive," for universal use.

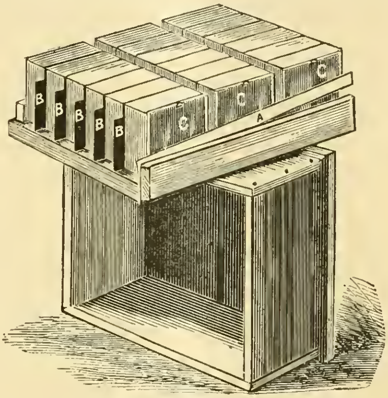
The strongest argument against this hive was the difficulty in manipulating it—there being no movable side, and many have tried to invent something to cover this want—but so far nothing hás given universal satisfaction.



In the present instance, Sperry & Chandler, manufacturers of the North-Star Hive, have combined the peculiarities of it with the Langstroth, and by so doing will bring it into very rapid use. It is correctly represented by the cut.

Many are advocating a loose bottom board, but this hive obviates that difficulty. By simply turning the thumb-screw, L, and opening the movable side (which takes but an instant), the frames can be examined, and by removing the loose side-board, M, the bottom-board may be cleansed—giving all the advantages claimed for a loose bottom-board, without its disadvantages.

The New Langstroth Hive is peculiarly adapted for the production of comb honey—its honey rack is the best in use, and is perfectly adapted to the use of the prize boxes. It holds 18 prize boxes, with the separators between, marked B B in the cut. The wedge (A) holds all with a vise-like grasp. The outer boxes are glassed as they stand on the hiv (C C C). By removing the wedge (A) any box may be instantly removed, examined, returned, or replaced by an empty one —the spaces between the rows readily admitting the fingers for that purpose. They are adapted to 3, 6, 9. 12, 15 or 18 honey boxes.



It is simple, durable, and withal cheaply constructed, as will be seen by figures given elsewhere in this number.

We have ordered a number of them, and hold ourselves ready to ship immediately either material cut ready to nail, or nailed ready for painting and use. As railroad companies always mar the paint, it is far better to ship before painting, and thus have them look fresh and neat when first used. They are adapted either to the production of comb or extracted honey, and can be supplied in any shapes or quantities desired.

☞ We have an inquiry as to the standard of excellence of Italian bees, and would like those who are experts to send us in clear and concise language what they consider such standard. We ought to settle upon it, and must before long. "Now is the time, and this is the place." Let us agree upon a standard.

CARRYING THE WAR INTO AFRICA.—John West, Esq., 877 West Monroe St., Chicago, writes: "DEAR EDITOR.—I send you an extract from my friend Mr. Arthur Todd, an English gentleman, who has commenced bee-farming in French Africa. He has, to my knowledge, read the works of the best authorities on the subject published in England, France and Germany. This renders his opinion of the merits of your BEE JOURNAL more valuable. I send him the BEE JOURNAL every month. I extract the following from his letter, dated April 16, 1878:

> "Blidah, Algeria, French Africa.—Many thanks for all your help. The AMERICAN BEE JOURNALS are of more practical use to me than all the other books I have. Please send me 'Cook's New Manual,' as soon as it is out."

"Heap-by-Cheap" Goods.

Cheapness generally means inferiority! Indeed, a recent writer sagely remarks that excellence and cheapness cannot go together, and we would save ourselves much annoyance and disappointment by recognizing and remembering the fact. He adds:

> The house which the contractor builds too cheaply will invariably have weak walls, woodwork that will shrink at the corners, plastering that will drop off, and paint that will crack. How can it be otherwise? The builder will not make a present of good work and good materials to his patron; cheap work will be given for cheap pay. The tailor will not put good material and skilled labor in the suit of clothes which looks as good as the best, but is sold at a price far below what is asked for the genuine article. It cannot be done, and it should not be expected; but rather those who are compelled to buy cheaply should philosophically make up their minds to bear the consequences that must follow cheap purchases. The cost of anything, and consequently its value, is measured by two things: quality of material and the labor employed to make it. These in turn may be superior or inferior.
>
> In consequence of the demand for cheap articles, our stores are full of inferior goods. Furniture made of unseasoned wood and hastily glued together; musical instruments that are mere varnished cases with the imitation of keys, strings and reeds for interior mechanism; silverware with a varnishing coat of shining gloss; jewelry that is fair to look upon, but is hopelessly tarnished by use; clothing that presents a fair exterior, but that rips and fades and loses shape when worn; gloves that gape at every seam at the first wearing—these, and innumerable other constantly recurring instances of inferiority, impress upon us the fact that, ordinarily, cheap things are the dearest.

The cry for cheapness some time since reached the bees—dollar queens are the result—squeezed a little, and in quantities, cheapened to 90, 80 and 75 cents!

As a consequence, the country is filled with degenerated stock. This dollar queen business—an everlasting disgrace to the one who introduced it—should be everywhere frowned down, with grape sugar for feeding bees, glucose for honey, and paraffine for beeswax!! Begotten by the degeneracy of the times, brought into being by selfishness and avarice, it has ripened into a sad calamity, which like a pall overhangs the whole of bee-dom.

While some are charging $4 for home-bred queens, at this season of the year, others are offering *imported* queens for $3.75 each! What can the purchaser expect as a result of obtaining such stock? Do stock and chicken fanciers encourage such reckless economy? It behooves all to ask themselves the question—whether these exceedingly *cheap* purchases are not usually the dearest in the end?

Morris Ellis, a farmer living near Georgetown, in Vermillion county, started home from Vermillion Grove, the other day, with eight stands of bees in his wagon. The bees grew very angry, doubtless from the jolting of the wagon, and in a solid mass lit upon the horses and driver. The horses did not attempt to run, but lay upon the ground and rolled in terrible agony. Both horses have since died, and Mr. Ellis lies in a very critical condition, and is not expected to recover.—*Vermont* (Ill.) *Chronicle.*

Isn't it strange that Mr. Ellis did not know enough to fasten up the entrances before removing bees? It was downright presumption. Spirits of turpentine is a good application to cure bee stings.

☞ A model of a swarm hiver is at hand, from F. R. Davis, Wolf Lake, Ind. It is so arranged as to prevent the queen from going out with the swarm. On their return, finding "her majesty" in the hiver-box, they cluster on combs attached to movable slides above. Their weight will open a space for the swarm to go up into the empty hive above, which will work out on a different side from the old colony. We have placed the model on our Museum shelves, to be examined by our visitors.

☞ H. O. Wright, of Lodi, N. Y., says a man, by the name of Miller, has patented the Quinby hive, and claims a royalty of him for making and using it after he has been using it for 5 years. This is one of the abuses of Patents, and will be obviated by the new law. Miller may annoy, but cannot hurt any one for using the hive.

Patents—Something about them.

It is estimated that the people of the United States reap yearly from patented inventions the sum of four thousand millions of dollars. Yet the inventors have barely reaped from these inventions enough to pay for their board and clothing, if it was equally divided among them. This shows our Patent Laws are defective. Old patents, which have never been put into use, and are almost unknown, because not sufficiently perfected to make a practical machine, are raked up by patent sharks, (rarely inventors), and galvanized into life by a re-issue, and sprung like a trap on the good invention and those using it. To correct this, there is now a bill in Congress providing that any man who has bought a machine before such a re-issue can not be prevented from using it by one of these galvanized patents, under a claim the old patent did not contain.

The bill also provides that all patents shall pay a fee of $50 five years after its issue, and another of $100 five years thereafter; and in case the fee is not paid, the patent expires, thus making the owner sit in judgement on his patent after he has had time to cool down the ardor of his first love. The bill also provides that in suits for infringements, where the prosecution has been for extorting money under claims obviously unjust, the court may make the person bringing the suit pay, not only the ordinary costs, but the whole costs of defendants counsel, and witness and expert's fees. With these corrections to our patent law, no man need suffer at all from unjust claims or extortions of patent sharks.

☞ In *Gleanings* for May, page 161, it is implied that W. J. Andrews had lost the use of his arm from bee stings. Friend Andrews wants that corrected. It was the result of a pistol shot in 1878, and bad surgery.

☞ H. Scovell, Columbus, Kansas, has sent us a sample of his all-wood queen cages. Saw cuts take the place of wire-cloth. An auger-hole supplies the place for provisioning. They are exceedingly neat and cheap, and can be obtained at this office, price 5 cents, or 50 cents per dozen.

☞ Thurber & Co., of New York, have sent 2,761 barrels of honey to Liverpool; it was sold on the 17th ult., as we see by a Liverpool paper.

MELILOT CLOVER.—In answer to many inquiries, we repeat: Melilot clover may be sown any time. Four pounds will sow an acre, and it may be sown with grain. It stands drouth and frost, and grows in any soil—north, south, east or west. An acre will support 20 colonies. It blooms the second year and then dies.

☞ There has been so much call for teasel seed, we have procured some, which we can sell for 75 cents per pound.

☞ We have one of Barnes' Hand Circular Rip Saws, which works like a charm. It will rip any lumber with the greatest of ease and exactness.—The reader is referred to our description of it on page 105 of the April No.

Chattanooga, Tenn., May 15, 1878.

"What effect will the late cold spell have on the honey production north of the Ohio River this season? Also what is its effect upon fruit and grain crops? Please inform us through the JOURNAL." S. C. DODGE.

[Unless soon ended, the cold and wet weather will greatly damage honey production. Fruit and grain were not seriously affected—only small plants were killed by the frosts early in this month.—ED.]

☞ The queen that friend Andrews offered for the best essay in the Southern Department, was awarded to Oscar F. Bledsoe, Grenada, Miss. In acknowledging it, he remarks:

> "Your offer through the AMERICAN BEE JOURNAL has been handsomely fulfilled."

☞ Friend McGaw wrote us a few days ago that on opening a colony, he found some white-headed drones. We have heard of red headed ones before, and now we have the "grey-headed" fellows. We always thought they died too young to ever become *grey-headed*, but it seems their extreme youth does not in this instance save them for hoary-headedness. Friend McGaw promises to send us some to mate with our Cyprian queen, which we drew at the Burlington Convention. "Won't that be jolly?"

Humbugs and Swindles.

In *Gleanings* for May, Novice attacked J. W. Winder's honesty. We wrote Chas. F. Muth, of Cincinnati, who has long been intimate with him, and he assured us that Mr. Winder was honest, but had met with reverses, and was *unable* to clear up some business matters. Novice mis-stated the amount and ungenerously magnified $10 into $30, in his zeal for a fight. As Mr. Winder asks to be heard in self-defense, we cheerfully give place to the following explanation:

My attention has just been called to an article in the May number of *Bee Gleanings*, under the head of "Humbugs and Swindles," in which I am arraigned for not paying one J. P. Parker $30. The statement in the first outset is a falsehood. I never owed Mr. Parker one cent, personally, as stated, but we did owe him under the firm name of Gray & Winder.

The queens could not be procured as proposed, on account of the unsuccessful importation made by Mrs. E. S. Tupper & Savery. Some time after this failure to procure the queens for Mr. Parker, I made satisfactory arrangements with him for a settlement. I was to send him $15 in three payments of $5 each. I did send him $5 at the time, some 5 years ago; and from that time to this I have not heard one word from him. About this same time I received a letter from the editor of *Gleanings*, threatening me if I did not settle up, &c., with Mr. Parker.

I stated to him, by letter, the arrangements I had made with Mr. Parker, and that we needed none of his interference; we were able to attend to our own business, &c., and that if he did publish me in the *Gleanings*, that I would not pay any more.

He did make some false statements in his paper in reference to me, which were calculated to injure my standing and character among persons that did not know me; and as I consider and always try *to make my word good*, I have not paid any more on the $10, (not $30, as stated).

I supposed he had had $10 worth of malicious satisfaction out of the course he had pursued, and so I called the account square, and think I am justified.

Novice is down on thieves and swindlers. Let me ask who has appropriated and copied my curved pointed, uncapping knife? Who has copied my cuts and appropriated to his own use and sale my Swiss or Gerster wax extractor, that is so highly recommended in *Bee Gleanings?*—As long as I manufactured and advertised the curved pointed knife, he always spoke of it as of no consequence. Now he makes and highly recommends it for uncapping, and the wax extractor he highly recommends for getting out wax, &c., but he fails to hint who he purloined them from.

If a man proposes to reform the world, I think it poor policy to preach one thing and give it the lie in the practice. Brother, you had better drag the mote out of your own eye, and then you can see more clearly how to pluck it out of your neighbor's eye.—"Let justice be done though the heavens fall," if it does appear hard on those that go nosing about, appropriating bee appliances and other peoples' business to their own use, and making false statements under the hypocritical cloak of right and justice to all.
J. W. Winder.

Terre Bonne, La., May 20, 1878.

Bee-keeping in Western Michigan.

We clip the following statement in regard to bee-culture in Western Michigan from the columns of the *Barry County Sentinel:*

The business of bee-keeping has become one of importance in Michigan, and many gentlemen in various sections are giving it a great deal of attention. Among those who have been quite successful is W. L. Cobb, of Middleville, who has made it a study for several years, and now has all the modern appliances and improvements. He has lately purchased a foundation machine, intended to use for moulding out of wax the foundation for comb with which to fill the hives of new swarms. This plan saves a great amount of labor for the bees, and in many instances they will have the hive nearly filled with honey, where in the ordinary manner they would still be building comb. Bee-keepers should look up these new improvements and adopt them when they are evidently beneficial. Marcenus Wright, of the same place, has also been eminently successful with his apiary.—During the past year his yard has been an object of curiosity, there having been at one time 230 colonies within one enclosure. He has an improved method of packing his hives for winter, which has been found a safe manner of carrying them through the long winters without loss. It is worth one's time to travel many miles to visit these gentlemen at any time during the season.—Mr. Wright has become so used to the bee stings that it seems as though he rather likes them; at any rate, at the time when strangers would be driven from the yard by these little fighters, he walks among them fearless and unconcerned. They either leave him alone, or else they have learned from experience that they cannot hurt him.

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Chinese Mustard as a Honey Plant.—Perhaps one of the very best honey producing plants is tall Chinese mustard. It remains in blossom a very long time, seems to yield honey continuously, is equally vigorous to resist drought, or wet, and flourishes in all soils. It may be sowed any time from May 1st to middle of June—the earlier the better. It will seed itself—its greatest drawback; yet, it is far less troublesome as a weed than common mustard.—It should be planted in drills, a foot apart, for ease of cultivation. An ounce will plant a space of one rod by four.

We can only fill a few orders for this seed. Price, per ounce, 20c.; quarter pound, 75c., postpaid.

Foreign Notes,

GLEANED BY FRANK BENTON.

Migratory Bee Culture.

One of the questions at the Strassburg Convention, in 1875, was:

"In wandering with bees, what is to be observed in order to obtain a favorable result?"

The subject was introduced by Herrn G. Dathe, of Eystrup, and his remarks are summed up by Herrn Mayerhœffer, in *Der Bienenvater*, as follows:

"The speaker stated, that in Hanover, where he follows bee culture, migrating with bees is very common. In the spring, the bee-keepers go from the heaths to the marshes, and thence, late in the summer, to the buckwheat and heath localities. He migrates yearly, with an average of 400 colonies to the buckwheat and heath pastures.

"This migrating or wandering with bees is by no means easy; one must observe many points, if, instead of the hoped for benefit, damages will not be brought about. The first condition towards a good result is a good location for the apiary. In the selection of the spot for this purpose, 3 things are to be observed:

1. "Whether the pasturage is good or not. Blossoms do not yield honey alike everywhere, and much depends upon the weather. Then, the location must not be too far from the pasturage; this is particularly the case with buckwheat, hence the saying: 'The bees must have the buckwheat before the entrance.'

"The bees must be protected from the wind and weather, and against the attacks of man and beast; therefore, many migrating bee-keepers like to build closed bee sheds. When a single one is not able to do so, several unite and build a shed together.

2. "The cost. Even with the best of places, the cost is not covered, if the distance to travel is too great; the resulting expenses absorbing the return. One must never base his calculations upon good honey years; but on the contrary, upon medium or really poor years. It frequently happens that one takes his stock away from the heath lighter than when it was brought there. Whoever has not far to go, and therefore has small expenses, will not be held back by such misfortunes, but can try migrating every year.

3. "The hives must be arranged for migrating. The transport-hives must be so constructed that they can be loaded and unloaded with ease, and they must furnish sufficient air to keep the bees from suffocation. Of the basket-shaped hives, the ordinary reversible form is best adapted to moving about. Among movable comb hives, however, the equal chambers. In general, migrating with movable comb hives is safer than with others. The speaker said, that in transporting colonies in boxes he had lost *none*, which was not the case with those in common round hives.

The fourth point is their transportation—its manner. That the construction of the hive has an influence in regard to their safety in transporting has been observed, and now comes the consideration of the method of loading and the care during transportation. The means most commonly employed in transporting them are the wagon, the railway and the boat. If one has but a short distance to go, it is much better to take the bees direct by wagon, to their place, for it avoids frequent loading and unloading. Of course, when the distance is great, the railroad is to be used.—Transporting by boat is to be recommended very highly. In loading the hives, they must be so arranged that the corners of the combs are always directed toward the point whence the greatest concussions come; in wagons, toward the wheels; in railway cars, toward the buffers. It should be observed that the accidental sliding of the hives must be avoided by nailing cleats about them. The wagons must not have any standing racks. The best time to transplant them is at night. If, however, one cannot arrive at his journey's end in one night, it is best to stand the hives in a cool place and let the bees fly. Should he be compelled to travel during the day, the bees on board of the cars should be in a cool, covered car; those on boats, under a canvas roof, and ordinary wagons should be covered with cloth. All rough roads, and the paved streets of cities should be avoided, even though it be necessary to go farther in order to do so.

"A fifth point is to be mentioned: The bees cannot remain without watching and attention. This is especially necessary in the spring, because the swarming time occurs then, but less so during the heath harvest. In the latter case, looking to them from one to three times a week answers.

"In closing, the speaker observed that from the remarks it is to be seen that in migrating with bees it is not so easy to obtain a favorable result. But if all conditions for a favorable return are at hand, the greatest return can be obtained in this manner. (General applause)."

In his report of this topic, Herr Mayerhœffer makes the following observations:

"Migratory bee-culture is the height of rational, improved management. To say anything more regarding its value would be like 'taking coals to Newcastle.' Yet, why is migrating with bees so little known here in Bohemia? (This year, so far as I know, only my friend Summer, in Egerland, tried it; the result was exceedingly favorable, as a surplus of about 20 lbs. per hive was obtained). The first culture of bees in Bohemia was the forest bee culture (*Waldbienenzucht*), and in this way, the most productive spring and autumn harvests are to be secured. Then in Bohemia 'gums' are used, which are wholly unsuitable for migratory bee-culture; in addition, there exists the superstition that if the bees are moved from the place they will invariably go to destruction. Bohemia is, in consequence of its intersected surface and the resulting division into field and forest, (which, perhaps, alternate more rapidly than in any other country,) very favorably situated for migratory bee culture. If in the level regions the flowers have disappeared, innumerable sources of honey present themselves among the mountains. With us, migrating seldom occasions great cost or difficulties, since the harvest localities, in most cases, do not lie far apart; indeed, many times they are only a few minutes outside of the range of the bees.—Even from Prague, which is quite distant from mountains, a journey to the heaths takes no longer than 1½ to 3 hours by rail. Finally, I will make one observation:—Would it not be an advantage to the bees to be taken from the dry desert air of the plains into the much cooler, damper atmosphere of the forest?"

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BEES wintered well in the vicinity of Paris, and accounts from various parts of Germany show general success in wintering there. From Italy, where the season is of course further advanced, *L'Apicoltore* (Milan) for April, brings the following report: "It is not an inclination to fall into vain laments, but merely as a matter of duty that we state that the bad weather during the past month has destroyed the first honey resources—the rape blossoms and those of the fruit-bearing plants. It is therefore not difficult to see beforehand that swarming will be somewhat late this year and not very great."

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ALSACE LORRAINE.—M. Dennler, one of the editors or *Der Bienen Zuechter*, says in the April number:

"A good basis for ample returns during 1878 is laid. Wintering, thus far, has been favorable. From the first of January until the middle of February, continuous, yet not too severe cold weather has kept our little creatures in a normal and beneficial condition of rest. Since the latter date the weather has been growing milder every day; the early days of March appeared as real spring days, and the bees buzzed and carried in pollen as in the month of May. The unpleasant days following have caused no damage. The first cleansing flight took place here on the 14th of February. In the rearing of brood the hives are already tolerably advanced, particularly the straw hives."

Note the statement of M. Dennler's experience with straw hives for wintering. The weather had been cold constantly up to the middle of February, yet he says his hives were well supplied with brood at that time, some having two combs filled to the bottom with sealed brood. Of course colonies located in large wooden hives, having the combs well packed above and at the sides with dry chaff or straw, and the cover raised to permit the escape of damp air, have all the advantages of straw hives for wintering.

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PRESERVING EMPTY COMBS.—At a convention in Austria, Herr Gatter, of Vienna, made the following interesting remarks: "While traveling in Italy I met a merchant who showed me a fine stock of empty combs. This was at the hottest time of the year; and, astonished at not finding a trace of moths about his combs, I asked him his secret in preparing them. 'It is to chance that I owe it,' replied he. 'One day I deposited quite a quantity of scraps of comb in a wareroom where there were also some empty petroleum casks. Shortly after this one of my sons, wishing to put something else in the place occupied by the scraps of comb, put the latter into one of the petroleum casks. These combs were forgotten, and a long time afterwards when I found them they had not suffered from the ravages of the moth. Since then I have preserved my empty combs in petroleum casks. If I wish to use them afterwards I first expose them to the open air in order that they may lose the odor of the petroleum. If, after some time, the cask loses its strong odor, one can smear it with petroleum.'" A dealer in furniture informs the writer that among upholsterers and furniture dealers the practice prevails of immersing and soaking in naphtha valuable pieces of furniture, in order to prevent moth larvæ from injuring the cloth or wood. One can have a chest or long box to hang his combs in, with a shallow pan containing petroleum in the bottom, and the wood of the box can be thoroughly impregnated with the same, so that if the plan works as indicated, there need be little trouble in keeping empty combs during warm weather.

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THE ORIGIN OF BELL RINGING FOR BEES.—An Englishman told me, some time since, that an English bee-keeper said to him that bees had no ears, and, of course, could not hear. He asked him why he rang bells for them when they swarmed? He answered, that people were not there allowed to cross fields and gardens, but the law provided that a person could do so if he was following a swarm of bees; and the ringing of the bell was to let the occupants of the premises know that he was following a swarm of bees. This is the best explanation of the origin of bell ringing for bees that I have ever heard. S. K. MARSH.

Palo, Mich., May 10, 1878.

Benton Harbor, May 4, 1878.

"What ails my bees?" was the question asked by a neighbor, who lives on the lake shore, and who has, or had, about 15 colonies, 7 of which have gone "where the woodbine twineth," or somewhere else.—Their hives contained plenty of honey, in good and sweet condition; plenty of brood in all stages, no moths nor mold, nor signs of any. They seem to be dissatisfied, and swarm out. One swarm was stopped, returned and queen's wing clipped; but they afterwards went off, leaving but a very few with the queen They seem to have got the western emigration fever, which is raging this spring. L.

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☞ Now is the time to sow the Rocky Mountain bee plant. It grows from 3 to 6 feet high and blooms from July till frost.

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☞ J. H. Nellis of Canajoharie, N. Y. will hereafter supply the Van Deusen Bee Feeder at reduced prices.

Correspondence.

For the American Bee Journal.

Bees and Hive-Making in Southern California.

Something over 2 years ago, I was compelled to leave my northern home in Michigan, on account of ill health, and seek a warmer climate. I decided upon California, and chose the southern portion. Ultimately I built a home in this place. My hopes have been realized, in the recovery of my health and finding a delightful climate.

Formerly, my experience in manufacturing machinery and agricultural tools, perhaps, has enabled me to take hold of the mechanical part of the business to advantage; and, possibly, a few ideas of mine may be of advantage to some, for it is through an interchange of views that all business is benefitted. What bee men in California, and in fact all bee men want, is means to do all their work within themselves, as much as possible and to the best advantage.

First, I got me up a hand circular saw, that in manufacturing bee hives is very complete and a great saving of labor, and not expensive to make. I have never yet seen a foot power capable of driving a circular saw to any advantage; besides the strain on a man to use one is unnatural and he can't produce half the power that he can with his hands.

First make a common saw frame, (light,) and a small arbor, not over ⅝ in. in diameter and ⅜ bearings, 2½ long; pully 2½ in. in diameter, and 2½ in. face; use babit or type metal for boxes, run into a shell, or run them in the frame; have a V on one of the bearings, to prevent end play of the arbor. Have a fly wheel, 3 ft. in diameter, weighing 200 lbs.; fasten to its arms a pulley, 18 inches in diameter, 2½ in. face; hang this on 1¼ round iron, as long as the frame is wide, bearings on each end. On one end inside the bearings put a 5 in. spur pinnion, ⅞ in. face and ½ inch pitch. To match and drive this, use a 16 in. spur wheel, hung on a shaft, 1 in. in diameter; to this shaft attach the crank, 14 in. long.—Put the pully and fly wheel at one end of the frame and the saw arbor ¾ of the distance to the other. With this machine, in 12 hours, I cut all the stuff for 100 hives, (Langstroth,) including the movable frames, 10 for each hive, 10x12; bottoms, tops and honey boards, all the cleats, and rabbeted the sides for bearings for the frames, all cut out of wide lumber.

I have made what all who have seen it say is the most complete machine for holding the Langstroth frame while it is being nailed. Take an inch board, 2½ ft. long, and 1 ft. wide. To each end of this, fasten legs so it will stand edgeways, up and down, and 18 inches, from the lower edge to the floor. Fasten to the lower edge a piece of 2x3 the same length; now take another inch board, 10x18 inches, fasten to it across one end, a piece 1 inch square and 10 in. long. Now, 10 in. from this piece fasten another piece of inch board, 7x10. Now, on this 7x10 piece strike a 10 inch circle and work to it, the center of which will be 12 in. from the first square piece. Through this center put a large wooden screw, and into the center, lengthwise of the first board and 2 inches above the center, up and down, screw it just tight enough so it will admit of the rounded board working back and forth. The lower rounded edge will rest on the 2x3 that was fastened to the main frame or first board. Now, on the No. 2 board, 10x18, between the inch piece and the 7x10 piece that was fastened to it will be, as it were, a sink of 1 inch, oben at the ends; this is to hold the 3 pieces to form the frame; but, as yet, only the top and bottom pieces is held. To hold the sides, take 2 pieces of inch band iron, 2 inches long, and screw fast to the center of this opening, projecting up 1 inch. Now, to clamp and hold the 4 pieces in place, make a button 10 in. long, ¼ in. wide and fasten with a screw in the center, turn this button on to the top and bottom pieces. This holds the whole 4 pieces firm, to nail; the sides being held by the pressure against the top and bottom.

To nail them, you have but to turn this No. 2 board (after nailing on one side) up, and nail the top or angle piece; and this No. 2 board is held in position to do this by a spring; turn down and nail the other side. The pieces are all put in position quick, held firm and square, and less than half the time is required to nail a frame than by any other machine I have ever seen. It is very simple and easily made.—I saw my top and angle pieces all in one, which makes a much stronger frame.

And now, one more improvement; or, at least, it is so considered by all who have seen it; yet, some may have a better plan. If so, let us know it. This is a slide to open and close the fly hole in the hive. To make the slide, and guide to hold it, take a piece ½x1 in., rabbet out from one edge ¼x⅜ in., cut off from this a piece for a slide, long enough to cover the fly hole, and another twice as long, and nail to the hive for the slide to work in. The lower edge of the slide will run on the bottom board.—This slide must be put in very loose, so that in wet weather it will work easy. To hold it in position and to regulate it so it will always work, take a strip of tin ½ in. wide, 3 in. long, and with a fine saw cut a slot in one end of the slide, insert the tin, bend it over, and with a small French nail fasten the other end of the tin. This tin is now between the slide and box. Take a small screw eye, and screw it through the slide against the tin; this pushes the tin against the box. With this the slide is regulated, and the eye screw serves as a handle. To close up a hive, you have but to move the slide and turn the screw and the slide is held fast. After the screw has been put in, take it out and file off the point, to prevent its pressing through the tin.

All this may seem but a trifle to some, but those who handle bees much will appreciate its worth.

And now a few words about bees in Southern California: The readers of the

American Bee Journal have been informed by its correspondents of the general condition of the bee business here. Some have painted the picture as dark and gloomy as they formerly have in bright and glowing colors. Perhaps a medium between the two would present a fair state of the business at the present time. The want of sufficient rain last winter to bring out the bee feed, and the extreme cold and backward spring, of the whole of Southern California, tells the whole story why so little has been done in the bee business ; or rather, why so much has been done to so little purpose. Forming an opinion now from the best information I can command, I would say at the present time, there is not more than one-half the bees in Los Angeles, San Diego and San Bernardino counties that there was last March ; and judging the future by the past, I would say that not more than three-fourths of these will get through to see next March. So that while Eastern bee men have no fears of California honey being crowded on their market this year, they need have but little for the year to come. While this is the dark side of the picture for California bee men, the bright side is the same with the bee business as with most all other kinds of business. The exceedingly rapid increase of bees in this country, and the wonderful growth of the farmers' and fruit-growers' products is the bright side, and enables California to recover from the effects of a drouth in a short space of time. The difference between a drouth in California and a drouth in a cold climate is this, the one comes out of a drouth and goes into a cold, cheerless winter, and the other comes out to go, as it were, into a growing summer.

There seems to be a wide difference in the opinions of bee men, as to the existence of honey dew. It is my opinion that there is something that settles or collects on the trees, at night, which the bees are fond of, and go for it as soon as it is light enough for them to see ; and, as soon as the sun has shone on it a short time, they quit their work. With us, it is mostly on the sycamore they work. I would like to ask some of your experienced bee men if bees will work on flowers that will make poisoned honey, or that will poison themselves.

Two men here have lost nearly all their bees, some 200 colonies, and we can come to no other conclusion than that they are poisoned with their own honey. In June, the bees were moved with ours from the mountains to the valley, near the coast.—About August 1st., we moved ours back ; the 200 colonies remained, and after a few days they seemed to be doing well and storing honey, but 2 weeks later they commenced dwindling away, and none but young bees could be found about the hives. A part of them were moved back to the mountains before this was noticed very much ; but the effect on them was just the same as those that were left. They had plenty of honey and their queen and brood coming out ; and still they would dwindle all away and leave a hive full of honey.—Ours that were brought away 2 or 3 weeks sooner did well, and showed no such signs, whatever.

If any other bee men have had like experience, and can account for it and will do so through the American Bee Journal, they will render a favor to bee men in this section.

For the past month we have been feeding our bees on grapes. We crush them, and feed 100 ℔s. to 150 colonies. It makes plenty of business for them, and they don't think of robbing. The strong colonies, of course, store more than the weak ones, but it is easily transferred from the full hives to the empty ones. The grapes cost but 25c. per 100 ℔s., besides the picking. This, we think, is much cheaper than sugar or honey to feed, and no trouble with their robbing.

Some of your correspondents question the statement that hens will catch live bees.—Some of our hens made such a business of it that we had to move the troughs that we kept water in for our bees where the hens could not get to them. The skunks are very fond of bees. We have watched them, by moonlight, scratch on the hive until the bees came out, and then rake them off with one paw into their mouths. The little swifts, too, that are so plenty in California, are fond of bees. We have seen them catch them as they came out of the fly hole. We shot one while he was in the very act, cut him open and found a dozen bees. The bluejays have been taking so many of our bees that we have had to shoot them to get rid of them.
M. S. Baker.

For the American Bee Journal.

My Hive and Plan of Keeping Record.

I have been using movable frame hives for the past 16 years, and have read all the bee papers and books. We all differ somewhat in opinion about managing the bee.—Perhaps a little of my experience might help some beginner. I always winter on summer stands, as I have had no other place, and for that reason I use a very large hive. I first used a Metcalf hive, size 12x12 inches, and 17 inches high, 8 frames, with honey board and top boxes, movable front, frames stand on the bottom ; hives made single, double and quadruple. I used this size for 10 years, and then made up my mind that it was too small, I lost too many bees during the winter. I then made the hive that I use now, my No. 2, and I have another, No. 3, that I designed to winter in the bee house or cellar.

DESCRIPTION OF NO. 2 FOR OUT DOOR WINTERING.

Bottom, 28x28 inches, a partition nailed across the centre, 28 in. long by 21 in. high ; sides 28 in. wide and 22 in. high, nailed to the bottom board, with movable ends, making 2 divisions of the hive 28 in. long by 13½ and 21 in. high, inside measure. A 3 in. strip nailed across each end, for a tie, to keep the 2 outsides and the partition the proper distance apart. In this hive I have room for a tier of side boxes, 6 in. wide at both ends, and room for 10 frames. I use a honey board on top, 15x15 in., and 2 other boards, one each side of the honey board, 4½ in. wide ; they lay over the side boxes.

I use a top chamber, 7 in. at the eaves, and 10 in. at the ridge; hinged at the ridge for convenience to work the hive. The chamber rests on cleats, running around the hive, ½ in. below the top. In this hive I keep 2 colonies of bees; when I work with one, I turn ½ of the chamber over on to the other half, which saves lifting it off the hive. When I use this hive for extracted honey, I put in a movable division board, and use from 12 to 15 frames or more, as I choose, or can have a perfet colony with only 2 frames. I wintered 2 colonies this winter with only 2 frames each, and they came through the winter all right.

WINTERING.

My manner of wintering is to put the frames in the centre, and division boards on each side of the bees, and then fill the balance of the hive with chaff or fine straw. I usually have 6 in. of chaff at each end of the hive, 7 in. of straw overhead, in the chamber. On the back side of each, that is, on the other side of the partition, there is another colony of bees, to help keep warm. So there is only one side of each colony that comes to the weather single; and that side can very easily be made double. Here we have a big colony of bees surrounded with someteing to keep them comfortable; and it is the best arrangement I ever saw for out-door wintering. Some other hive may do better in the cellar, but I always winter out of doors.

KEEPING RECORD OF AN APIARY.

When we have 1 or 2 colonies it is an easy matter to remember all that is necessary, or if we forget just what condition they are in, it is no great job to look over just a few hives, but when we have 100 or more to work with, requiring the work of several hands in the busy season, then it is quite another thing. Then it is very necessary to keep some kind of record, especially if we practice artificial division. I have tried several plans of keeping record, papers kept in the top of the hives, little boards, slates, &c. I get my fingers daubed with honey, have to keep a dish of water handy to wash, so it is either honey or water on my hands nearly all the time.—That makes it bad to use paper or slate either, so I take a nice piece of pine lumber, 1 in. thick, 2 ft. long, and from 12 to 18 inches wide; plane it smooth on both sides, and then rule 4 or 5 columns on the left hand side, from top to bottom; in the the first column write the month; in the second, the day of the month; in the third, the number of hives; and as I use hives to hold 2 or 4 colonies, I use the fourth column to write the number of the division of the hive. Then rule across the board, just wide enough to write wth a pencil handy; rule both sides of the board alike and use it until it is full. Then copy off in a book if you wish to save anything there is on it; then plane the board and rule again. Two or three such boards will last all the season for 20 colonies of bees, without copying off. I have drawn off a sample, which I send, of last year's work. Have taken 2 new, and 3 old colonies and given the work of the season. I always have my second board at home nights, and criticise the work done by others when I am not along, so I know how it is done.

APIARY NORTH OF HOUSE.

Month.	Day of Month	No. of Colony	No. Division.	Extracted.	REMARKS.
June ...	6	1	1	....	Took 3 brood combs.
" ...	..	1	2	....	Took 3 brood combs.
" ...	..	2	2	....	New, 7 B. and 1 honey C.; gave this a hatched Q. brought from home.
" ...	12	11	1	....	Did not find Q.; took 3 C., put into 9-2.
" ...	..	9	2	....	New; 6 C.; put in 3 empty frames.
" ...	21	11	1	X 4 C.	Q. gone; cut cells.
" ...	..	9	2	X.....	Old Q. is here, taken from 11-1, June 12; the 3 empty frames are full; took 3 B. C.
" ...	..	1	1	X all.	Took 3 B. C.; saw Queen.
" ...	..	1	2	X all.	This had swarmed and gone back, and were hanging under the hive with their Q.; took 5 B. C.; put the Q. and part of bees inside the hive.
" ...	21	2	2	X.....	Strong; Q. laying; clipped her wing.
July....	3	11	1	X.....	Q. hatched; no eggs yet.
"	..	9	2	X.....	Took 3 B. C.; saw Q.
"	5	2	2	X.....	Strong; took 3 B. C.
"	..	1	1	X.....	Q. gone; lost by swarming out; Q. failed to get back with the bees; cut cells.
"	..	1	2	X.....	Took 4 quarts of bees; saw Q.
"	16	11	1	X.....	Clipped Q.
"	..	9	2	X.....	Saw old Q.
"	..	1	1	X.....	Did not see old Q; think she is all right.
"	..	1	2	X.....	Took 2 C. and 4 quarts of bees.
"	..	2	2	X.....	Q, all right.
August.	9	9	2	X 2 C.	Brood all right.
"	..	11	1	X 2 C.	Brood all right.
"	..	2	2	X 2 C.	Brood all right.
"	..	1	1	X 2 C.	Brood all right.
"	..	1	2	X 2 C.	Brood all right.

All extracted twice more; 2 outside combs; buckwheat honey.

Q. stands for queen; B. for brood; C. for comb.

Grant Co., Wis. E. FRANCE.

For the American Bee Journal.

How to Prevent Swarming.

With many bee-keepers, a most important question is, "How shall I prevent my bees from swarming?" All who have any experience in the matter know how annoying and unprofitable it is to have bees take the swarming fever when we want them to store surplus honey. Can swarming be prevented? I think it can. I am satisfied that bees will not swarm if their hive is comfortable, and they have plenty of room to store honey

Two years ago I had a swarm issue from a populous and prosperous hive, and the queen being clipped, they returned. I immediately gave the hive a thorough ventilation, and though I did not destroy any queen cells, there was no further attempt to swarm. A few days ago I opened the hive, and found the same queen that came out 2 years ago. The colony is now, and has been ever since, one of my best; and during the 2 years, nearly, since the time above referred to, there has been no sign of swarming. Ventilation, to be effective, must not only be at the bottom but at the top of the hive. One would be likely to suppose that with openings in the top of the hive, the entrance being in the bottom, the heated air would escape at the top, its place being supplied by the ingress of cooler air at the bottom. But such is not the case. The bees at the entrance of the hive are busy fanning with their wings, their heads being toward the hive. This produces a somewhat strong current of air outward; and if there are openings in the top of the hive the cool air enters at the top, while the heated air escapes from the bottom. To secure thorough ventilation, there should be a honey-board with a little space (about ¼ of an inch) between it and the tops of the frames. In the honey-board there should be openings covered with wire-cloth. If the wire-cloth be tacked immediately on the board, the bees will close the meshes with propolis; but, if it be an inch above it and several inches in area, they will not attempt to wax it up. I, at first, used blocks of board, each having an inch hole in it, one side closed with wire cloth; but I found that the bees would invariably close it up. But I have found that if a frame be made, say 8 in. long and 2 in. wide, and the wire cloth be tacked on that, and laid over the holes in the board, so that there is an inch space between the wire-cloth and the board, no attempt is made to close it.

To succeed with this plan, the surplus honey chamber must be protected by an outside cap having openings for ventilation. Ventilate your bees thoroughly in hot weather, and keep the honey out of their way, and you will not be troubled with swarming. M. MAHIN.

Logansport, Ind., May 14, 1878.

For the American Bee Journal.

Items, Statistics, Questions, &c.

DEAR EDITOR:—I have no interest in speaking kindly of the JOURNAL, except to give "honor to whom honor is due;" but I *will* say that the JOURNAL deserves the undivided support of every bee-keeper in the land. Truly, it is *the bee-keepers' friend.* There is no paper I feel more freedom and pleasure in writing to.

Our Semi-annual Bee-keepers' Convention came off, as announced in the JOURNAL, on Tuesday, the 7th inst., and was a grand success, both in point of numbers and the interest developed. I will send you full report, but it is so long you will not receive it in time for the June number.

The locust bloom is a failure, but still the prospects are good, and I believe at the close of the season we will have much to be thankful for.

I am trying to gather all the statistics I can in regard to the honey crop of Kentucky, and hope that every bee-keeper who reads this will furnish me with all the information within reach:

1. Number of colonies last season, with increase of same.
2. The kind of hive used.
3. The number of pounds of wax and honey produced last year.

This information is designed for the benefit of our State at large, and will be published by request of our State Agricultural Commissioner, W. J. Davie, A. M., in his annual report, which will be published in September next.

Will you or some of our bee friends kindly answer the following questions:

1. Where and when was the honey extractor invented, and by whom?
2. Who first imported Italian Queens and bees into this country?
3. When and by whom was the bellows smoker invented? As from early childhood I can remember bellows, on precisely the same principle, being used to kindle fires with.
4. What is the probable number of bee-keepers in the United States, and the average amount of honey produced by each, last year, or the total amount produced?

W. WILLIAMSON, *Sec'y Cent. Ky. B. K. A.*

Lexington, Ky., May 11, 1878.

[1. The Mel-Extractor was invented by Her Von Hruschka, in Germany, about ten years since. Noticing that a piece of comb, attached to a string in the hands of his boy, being twirled, was emptied of its honey, he invented the Extractor, which is similar in principle to the Extractor of to-day. His machine consisted of a wooden tub, with a vertical axle, revolving in a socket fastened to the bottom of the tub, and held, but allowed to project above the top. The comb basket was attached to the axle, surrounded by wire-cloth, the comb resting against it. A string was wound around the axle, and then being rapidly unwound, the honey was extracted.

2. In 1859 the first Italian bees were imported into America by Wagner & Colvin, from the apiary of Dzierzon, in Germany.—In 1860 S. P. Parsons brought the first colonies *direct* from Italy.

3. A bellows is an *old* invention, but such as arranged to blow smoke to quiet bees, though previously used in Europe, was first brought to the attention of apiarists by the late M. Quinby.

4. We have not the statistics to answer this question now, but hope to soon.—ED.

For the American Bee Journal.

Honey Dew.

In February No. of the AMERICAN BEE JOURNAL I found an article on Honey Dew, by W. K. Marshall, of Texas, which I expected to be answered by some correspondent in the March No.

The article is so entirely based upon erroneous conclusions and propositions that it ought to be corrected, as many readers might be miscarried by apparent facts.

It has been proved over and over again, by men of science, of all countries of the New and Old World, that the so-called honey dew is no more nor less than the secretion of the very numerous family of the aphidæ or plant lice.

It has also been often observed in Europe, that honey dew dropped from trees in such quantities that it moistened the ground.—The leaves fairly dripped. More than 50 years ago, Mr. Ehrenfels, who then had over 1000 colonies, reported that in his pine forests, the honey produced or secreted by the coccus or pine bark louse often dropped from the trees in such quantities that his wood-choppers were wont to sweeten their dinner bread with it.

Mr. Marshall bases his argument mainly on 3 points, viz :

1. "It is never found on all kinds of trees and plants at the same time.
2. "It is never found on dead leaves or anything dry, except as it has fallen, or been blown from some green vegetation.
3. "It is always found when vegetation is in a healthy and growing state."

1. Of course, it cannot be found on all trees and plants at the same time. The aphidæ family is probably as numerous as that of the spiders, the flies or the bugs, who all have their seasons of breeding regulated according to the time of the fullest growth of the particular tree or plant they live on. Do the bugs appear before the sap has entered the trees or bushes? Do we see butterflies before flowers boom ?

The same with all the aphidæ. When their tree or plant is in its richest state of sap, they have the condition to multiply, and they do it. When the flow of sap stops, honey dew stops also. When the second sap appears, our lice are there again. The more sap, the more lice ; the less sap, the less lice. When honey is lacking, do not our bees quickly quit breeding ? Do they not almost barbariously, like the old Greeks, expose their children to ravenous animals, or to the inclemency of the weather or starvation ? The louse honey, as it might properly be called, only appear in abundance when aphidæ are abounding. If Mr. Marshall, at the next appearance of honey dew, will more closely investigate, he will either find little, creeping, green lice on the young stems or under side of the leaves, or one of the other species of the shell-bark louse on any part of the trees or plants, *except on the upper side of the leaves.* In investigating, be careful not to overlook the youngest shell-bark lice, as they cannot be seen by the naked eye. The youngest are about the best suckers.

2. Is rather a wholesale assertion, not at all borne out by the facts. I have lying before me a piece of white paper, bespotted with divers small honey dew drops by some shell-bark lice, which live on a lemon tree, that was raised from a seed, and which stands near me. This little tree is now in its 4th year, and always has some shell-bark lice on it, in spite of the closest search, and the most thorough washing with lye, tobacco juice, &c. After a while, they always appear again, so that, if science generally did not condemn the idea of spontaneous creation, this might make me believe in it.

These shell-bark lice, we (my wife, my daughter and myself) are wont, these 3 years, to discover by the honey dew on the upper part of the leaves of the lemon tree, which never leaves the room, except for a wash. For the purpose of writing this article to-day, last night I looked at my lemon tree, and saw again divers spots of honey dew. Over one of the spots I fastened a piece of letter paper, which to-day has several distinct spots of honey dew on it. Mr. Marshall will, I trust, not object to paper, as it has answered better than a dry leaf ; as paper taken from a ream could not have old or new honey dew on it before I laid it under the louse. Two young shell-bark lice on an upper leaf, about 2 inches away, in an oblique direction, are the producers of the spots on the paper. If you wish to find the lice for a certain honey dew, never look straight over it, but in an oblique upper direction. They always eject obliquely, never straight ; and indeed, so sharp that I have often felt the force on my face, which could not have been if that miniature drop merely had fallen. If you wish to get a proof, spread a few good-sized sheets of paper, over night, under any tree that has honey dew on it. Next morning you will find plenty of dull and shining spots on the paper. Paper will, more or less, soak in honey dew, while green, living leaves will not.

3. This only proves what I have said under 1. I have no doubt, that Marshall has found honey dew where no insect could be found with a microscope. I have found honey dew on plants fully 10 feet from the tree, on which the producers lived. The force of ejection, the smallness of the drops and the current of air may bring it yet farther away. But mark : You never find honey dew under a leaf, while you never find, except as a rare case, shell-bark lice or any aphidæ on top of a leaf. If the lice are feeding on honey dew, why do they not go on the upper side of the leaves, or do they, from the under side, penetrate the leaves in order to suck the honey on the upper side ?

Leaves are not destined to exude any fluid. They are organized for the inhalation and exhalation of vaporous gasses only. In order to exude any fluid, their cells would have to burst first, which has certainly never been seen yet. Puncture a green leaf as much as you please, you will never see fluid exude. It is a different thing to intercept the flow of sap in a maple tree trunk, or cut a vine or wound a peach tree.

If in 1862 you had such a mild winter that your pine trees grew, the coccus, or pine tree shell-bark louse could also grow. Depend on that. I wish we had pine trees around here. My bees would often get a good meal from them in early spring.

I do not look upon honey dew as an excrement any more than on honey as an excrement, which it certainly is not.

The aphidæ, which live on grape vine, I have often observed with a good magnifying glass, when the ants would come, tickle them with their antennæ, and my innocent lice would turn up high their abdomen, on the upper end of which are 2 minute, hollow pipes, out of which presently spring 2, very small drops of a crystal fluid, which my ants would greedily lick up. Among

100 aphidæ I would find working, generally, from 2 to 4 ants. It is assumed by many scientists that aphidæ suck the juice, assimilate from it what they need and eject the balance, in about the same way as our beloved bees do; for bees change the saccharine matter they bring home, to a great extent, before emptying into the cell, which has also been proved by better men than I claim to be.

Mr. Marshall, I trust, will not feel offended, but false theories should be contradicted or disproved whenever seen. If more light is wanted, my lantern is always burning. CHAS. SONNE.

Sigel, Ill., March 10, 1878.

For the American Bee Journal.

Patents—Answer to D. D. Palmer.

No; we, too, don't like patents. They cost money, Mr. Palmer. But Mr. Langstroth has lived to see his original arrangement become the standard bee hive—the best and most popular hive in use. While he is not reported rich from his patent, several not over-scrupulous parties have made small fortunes by selling his invention. The fittest survive, and Mr. Langstroth has the *honor* of *survival*; yet, several of those same parties who copied his invention, changing only the form, and calling it an improvement, after his patent expired, became suddenly convinced that for all kinds of purposes, the regular standard Langstroth frame is best. Some of these parties—*survive also!*

Every honorable bee-keeper knows and gives Mr. Langstroth the credit of all that he claimed in his hive.

The honey extractor has been extensively sold, and is a valid and real invention.—The inventor did not take out letters patent, and as a result, not one-half of the bee-keepers using the extractor *even* know the name or nationality of the inventer. And, strange to say, he has not got rich from the *generosity* of those who do *not like patents.* Yet, like Mr. Langstroth, *he survives!*

Mr. Quinby made, advertised and sold a bellows smoker. As to its originality, I am unacquainted. Either because he did not get it *patented*, or that it was not coveted, or that certain unscrupulous parties who lived in his day and generation feared his influence, it remains to this day the *private* porperty of the lamented Quinby estate.

Bingham, in the spring of 1874, showed at the Michigan Bee-keepers' Association a direct-draft smoker, which he afterward added to and subtracted from, [and otherwise changed until the public were informed, at the Michigan Bee-keepers' Association of Dec. 1876, that on the 1st of March, 1877, the said Bingham's bellows smoker would be offered for sale. The smoker was shown so covered up in its main features that no one knew anything about it, except that it burnt sound, dry stove-wood, and would not go out on any reasonable neglect. Orders were taken in the convention from all but 1 or 2 of the members present. These orders were filled according to agreement in March, 1877, at which time a smoker was sent to the AMERICAN BEE JOURNAL, which gave the following notice and criticism:

> BINGHAM SMOKER.—"Friend Bingham has sent one to this office. It is similar in shape to the Quinby, but of larger tube, and heavier bellows. It burns any hard, dry wood, and keeps it ignited. After laying it down five minutes, it has sufficient fire to start again. It is supplied with full instructions for use, and will be kept for sale at this office."

One was also sent to *Gleanings*, and a month later the following notice and criticism appeared:

> "Mr. Bingham has very kindly sent us one of his smokers, which works just about as well as Quinby's, but so far as we see, no better. It is by no means as neat as the Quinby, and is much more cheaply got up. With our tools and machinery, it would be an easy matter for us to make them by the quantity for 50c. each. Why can they not be sold for an even dollar? I confess I hardly know where duty lies in such matters."

As I had never had much knowledge of the *Magazine* I did not send a smoker to Mr. King, who says in a private letter that if I had so done, he would have given it a good notice, as it was far, very far better than the Quinby.

As to the cost of making smokers I knew very little at that time, but as I was compelled to make them largely, I soon found that the price adopted as fair and honorable by Mr. Quinby, without a patent, would be ample for me with one, should I be compelled to get one to secure to myself the credit, and to my family the benefit of the invention. Accordingly his prices were adopted. As Prof. Cook's article, to which you refer, refers to the smoker question in part, I would ask with all due respect, Was the price of the Quinby smoker, which was so generously given and donated by Mr. Quinby to the cause he loved, so reasonable as to be an honor and a protection to him? If such was the case it was the *precaution* which I took, probably, which so turned the minds of those who so kindly advertised my humble invention, without my *consent* or *credit*; and is, therefore, a *large card* in *favor* of procuring *patents*, as a means of *introducing valuable* improvements to *actual consumers*, while it does *not* stimulate patents the *originals* of which are not coveted. T. F. BINGHAM.

Abronia, Mich., May 7, 1878.

For the American Bee Journal.

Furze, as Forage.

Mr. T. G. McGaw, in the April number, gives Mr. Eldridge's description of furze, but really does not do the plant justice, in an economical point of view, as to its value in agriculture. In the Chemistry of Food in relation to the Breeding and Feeding of Live Stock by Charles A. Cameron, Ph. D., M. D., &c. &c. 1868, he writes as follows:—

"This plant, instead of being unprofitable, deserves to rank amongst the most valuable vegetable cultivated for the use of domestic animals. It grows and flourishes under conditions that materially affect almost every other fodder or green crop.—It is rather improved by a cold temperature; it thrives best when supplied with abundant rain, but can survive a long drought."

The produce of an acre of furze is equal to an acre of meadow. For further information and analysis, the above mentioned work must be refered to.

I have seen, in Wales, several small water-wheels driving 2 rollers, in which are fastened strong teeth, for the purpose of crushing furze. J. S. WOOD.

Nyborg, Denmark, April 17, 1878.

For the American Bee Journal.

Interesting Topics.

A long time since I tried to help (or hinder) by a few lines the old JOURNAL.—A long and serious illness has caused a neglect, both of my bees and the good old JOURNAL. Its superiority over all other journals devoted to the same object is so visible that it commands respect from all.

ITALIANS *vs.* BLACKS.

The superiority of the Italians is so visible that it does seem it would long have been settled. I have had them side by side for 7 years, pure Italians, pure blacks and hybrids. There are three points in which to compare them. First, the Italian hives contain double the number of bees, and often *three times* as many. They travel farther for forage and are *never* troubled by moths. Last, but not least, in a poor season they will average 10 lbs. to 1 for the blacks, of surplus honey. Now, I don't need to compare them in any other respect, yet the Italian has claims of being superior in other respects. Colonies all in like condition at beginning of harvest—same hive, same locality, and tried in 5 different locations, side by side.

IMPORTING QUEENS.

Imported some Italian, Cyprian and Smyrnian, September 1, 1875, but they starved while in the express office at New Orleans. One Cyprian lived 24 hours after I received them. I regretted greatly the neglect of the company. The Italians were all dead and moldy; the Smyrnians were dead, but the combs clean; the Cyprian were nice and clean, and many of them able to move. We have ships plying between here and Java, so I can get bees from that Island, as there are native Javanese who come here. I can get Cyprian bees in the same way. I am *determined* to have them direct from their native place. I care not for second-handed races. They send hybrids to America, and then to be mixed by American bees again, and then sold at a fancy price, and then only one-fourth blood. None for me. There is one thing I never *could* believe, in the Dzierzon theory, viz: That pure queens mated with black drones will produce pure drones. I was always in doubt until I gave it 3 good trials and learned to my sorrow that my fears were well grounded. I am now arrayed against that theory and argue it at proper times from actual experiments during 3 seasons. I have fully satisfied myself. Let others do the same. I believe it impossible to keep an apiary entirely pure for a length of time, unless one is continually adding young queens that are tested or fertilized in confinement. After long and mature consideration I have decided to re-queen my apiary every year, if the honey season be good and breeding extensive; if not so, then every 2 years. In the South, a queen will not remain prolific as long as in the North, as breeding is carried on so much longer.—Two years would not be much too long for a good queen, but in a fine honey season when a queen keeps up 15 full section frames of brood from April 1st until August 1st, it uses up a queen.

FLOATING APIARIES.

I investigated this matter 3 years ago and found that to build a boat for the express purpose of carrying bees was not practicable, and gave the subject of forage along the Mississippi River, from Cairo to Natchez, a careful investigation, and found it would not support an apiary or a barge, but by going up small streams it might do, but have doubts. There is a similar object I have in view, as soon as forage begins to fail here, to move the bees up above St. Louis by railroad, so as to lose little time in transit; but if forage should remain good here, it would not be advisable, only in case honey fails here in the last of May—then go. In this State there is forage for 1000 lbs. to the colony if the atmosphere was only favorable, which is generally too cool. Many speak of the hot South; my objection is, it is *not hot enough.* I shall watch the season closely, and if our harvest is not good I will go to Illinois at once.

FERTILIZING IN CONFINEMENT.

Well may Dr. Parmly offer $25 for the "best method of fertilizing in confinement;" but hereafter, when I offer anything for a prize, I shall consider well who are to be the contestants and manner of decision. Yes, 'tis a fine plan to get the best mode on certain topics, for two or three to offer a small prize, thereby bringing out a few of the best, and then it is public. I deem it more honorable to communicate such things at once to the journals, when such a small sum as $25 is offered. I would give it free to the JOURNAL before I would compete for a sum less than $100.

I do not deem any plan to propagate a foreign race of bees in any way successful, unless done in confinement, to retain the race pure, to prevent loss from birds and other enemies, to prevent loss from perishing while on a bridal trip and from entering wrong hive. Queen breeding is very uncertain at best, and when attended with all these drawbacks it is very much of a risk. Now, to think of raising pure queens when there is any black blood within 10 miles—it is very uncertain to my mind. In Point Coupee, I knew two instances where there was not an Italian within 10 miles, and yet, there came a swarm with a fine Italian queen, mated with a black drone. I am familiar with several instances where Italians have come 5 miles and united with blacks; and is it not as reasonable to assume that blacks will do the same? The fertilization of queens must be done in confinement, if it is expected to keep the race pure. I tried it in 1872-3, and failed almost entirely. I tried again with much better success. I noticed last year the fertilization of 3 queens; in each instance they came out, rose about 15 feet high and then seemed to sail around in a circle until they met the drone, which I saw in each case; at the moment they met the drone I lost sight of the first two. I saw her all the time she was out; she met the drone as the others did, at the instant of meeting they fell within 4 feet of the ground, when they separated, the queen entering the hive, showing that copulation had taken place. With these observations I believe I know the requisite space for fertilization. I met a bee-keeper of many years experience who stated that he had observed the fertilization of more than 40 queens, and stated that it was in each instance as above stated. The expense in the North for a house would be heavy, but in this climate but light. If health permits, I intend to give it a thorough trial; as learning just the time a queen will meet the drone is an uncertain thing. One could sit and watch a nuclei for the young queen to appear, and as soon as she comes out put her and a drone in a cage and see what you will get. That I have tried and failed entirely more than once.

Another one asks for some plan to raise queens with less bees. Enough has been tried to show that in nuclei is not the proper place to start queens, and until the cells is 10 days old, it has not a safe place in the nuclei. So much raising queens in weak colonies has already been done, raised cells in very strong colonies, and when 10 or 12 days old put them into nuclei and in the confinement. I hope Dr. Parmly will succeed in creating an interest and get out all the wisdom possible, for when we get this Cyprian, Javan, and Smyrnan, how are we to keep them pure unless we succeed with the confinement? Will Dr. Parmly please give us a brief name for this process?

CONVENTIONS.

It seems that the National Convention has wandered far East. It is a good road to travel, and even to look in that direction and see one "with his hat on" is still better, but in the matter of bee conventions you have gone too far to do us any more service in the way of holding up the interests of the South-west. I will make a suggestion for the consideration of the South and West: Let us have a convention in St. Louis next autumn. Let us have opinions *pro* and *con* through the AMERICAN BEE JOURNAL.

BOX *VS.* EXTRACTED HONEY.

We are glad of the interest taken through the North in favor of box honey; it gives better opportunities for our extracted here, as it does not seem practicable to raise box honey. In giving accounts of those large yields of box honey, there seems something always left out; and when those who raise large crops of box honey, and give their mode of the same, there is always something not brought out—one important item left out—not mentioned, perhaps it is best.

WINTERING.

Wintering seems to be still a vexing question. Well, I am done on that topic.—If I was in the North I would send my bees South; not south just to middle Tennessee, but to New Orleans. The 1st of September my bees were weak, and had but about 12 ℔s. of honey; November 10, I prepared them for winter. The blacks had but little honey, Italians an abundance. I equalized and gave, as near as I could, 20 ℔s. to each one. During my absence, 2 deserted their hives, (perhaps were robbed). I have been examining this week, and find an average of 5 full frames of brood, gathering fully from willow and fruit bloom. Hives contain about 8 lbs. of new honey, (willow), and some old. I hope we may have a good season this year, as our last was one of the poorest ever known. W. B. RUSH.

Carrollton, La.

For the American Bee Journal.

Foul Brood, &c.

In reading the proceedings of a Bee Convention not long since, I noticed that Prof. Cook make the remark that he did not think the extractor was the cause of foul brood. He is perfectly correct in making this statement. My object in writing this article is to let all know that the modern management of bees cannot be the cause of foul brood. My bees have had the foul brood for the last 3 years, and I have never used the extractor. I have never seen but one in the State. I have never fed my bees anything; have never seen foundation.

When the receipt for foul brood came to hand, I commenced doctoring, and every colony I so operated upon has since died. Salicylic acid and borax will stop it for the time being, but the next brood is affected; and why should it not be, if the disease is in the honey in the hive, as the late Mr. Quinby said it was? I have lost during the last 3 years about 40 colonies of bees, but I hope that it is the last I shall lose from foul brood. I cannot now discover any signs of it in the colonies I have left. I have sent for an extractor, and if I find any more colonies affected, I think I'll take out every frame and extract all the honey.

The bees in my box hives commenced to die first. I have been using the new Quinby hive for the last 3 years, and I have not had a natural swarm from it, yet I keep the hives shaded, and give them plenty of box room, and occasionally put an empty frame in the middle of the brood nest. In the swarming season I do not keep more than 6 brood frames in the hives during the honey season.

The most honey I ever got from one colony was last season, 173 ℔s., in boxes and sections; they were black bees. Two years ago this spring, I sent $5 East to pay for an Italian queen, and in the course of time she arrived by express dead; the same parties, in order to make the loss good, sent me two more queens through the mails; they were also dead when they arrived. The same day that the first queen came, I sent $5 to Lower California, to pay for an Italian queen, and in 19 days I received by express a beautiful looking queen, and the first one I ever saw; she was put up properly.—Well, things went on smoothly until the

Italians got the majority in the hive, and when I would open the hive, they would make a bee-line for me, (they are so smart), and sting my nose and close my eyes.

It is generally considered. here in Oregon, that it is unprofitable to engage exclusively in the bee busines; but, I think, if it was not for foul brood, it would be profitable.—I know of not more than 5 or 6 bee-keepers here. I sell my honey at 25c. per ℔.

I have sent for the Prize Sections and Crate, as advertised in the AMERICAN BEE JOURNAL. I sent for the 2 ℔. glass jars last spring. I like this box the best of any I have ever seen. I have sent for Novice's 1 ℔. and 2 ℔. sections and tin separators, and if they come in good condition I consider myself pretty well fixed.

The wild willow bloomed here about January 15. It rained hard until about the 20th of February. The beautiful dandelion is commencing to bloom.

If I should make a guess at what the cause of foul brood was, I would say, "in and in breeding." THOS. BRASEL

Portland Oregon, Feb. 21, 1878.

* * *

For the American Bee Journal.

Wintering.

Perhaps a few words on the above subject might be of some use to such bee-keepers as, like myself, are not blessed with the best kind of a winter repository. As for out-door wintering, I have not much to say, as I have had but little experience and less success with it. If they were to stand out exposed, I could not expect them to winter in this climate with any degree of success; and if packed with straw and half buried, as is recommended by some, it would soon cost more to do that than it would to make a good cellar, and put them in and out of that once a year. Three years ago I put 5 colonies in a little place dug out under the house, and lost none in wintering, but lost 1 in the spring by them killing their queen. All were movable-comb hives except one, and that was a common box hive. I ventilated the box hive by blocking it up a very little and leaving a small hole in the top.—The frame hives were ventilated by leaving the entrance open about ½ inches, the caps left off and the cloths loosened up, but spread all over the top of the frames. I could not tell much about the temperature, as I had no thermometer then, but I know it was very irregular. In the coldest weather I kept a cup of water near the bees, and frequently found it frozen, but never saw any bad effects from the cold, except that 1 colony got the dysentery. I hardly think it was caused by the cold. That colony I frequently took up to let them fly on the window in a warm room, and out doors when the weather was warm enough, but never was benefitted by it. Every time they had a fly they were worse off, though they came through the winter, and by good care in the spring, they made a good colony.

That season I got 225 ℔s. of honey for each colony wintered, and increased my stock 200 per cent.

Two years ago I put 12 colonies in the same place, placing them 6 on a side on 2 benches. The temperature that winter varied from 37° to 60°, but most of the time the mercury stood at 48°. Hives were ventilated by leaving the entrance open about ½ inch, same as the winter before; the top I ventilated according to the temperature.—While the temperature was at or near 48° I left the cloth down flat, all over the frames, and when the mercury went down several degrees, I covered them up warmer, by laying several thicknesses of folded newspaper over them. When the temperature began to raise I took the papers off, and when the temperature raised much above 48° I raised up one edge of the cloth. When the mercury went up to 60° on the 31st of December, I found the bees as lively as in summer. I then about half uncovered the hives and left them clustering on top of the frames until the temperature went down far enough, then they went among the combs and I covered them up again, and so I kept changing the ventilation of the hives during the whole winter.

For cover over the frames I use 2 thicknesses of sheeting, doubled together with 2 thicknesses of newspaper between them.—I put them in on the 3rd of November, and took them out the last of March and lost none. All came through in excellent condition. The winter being very wet the ground filled up with water, and from February the water stood even with the bottom of the repository; for some time, and before time to take them out, the water raised about 6 inches, and when I took them out I waded in the water about ankle deep.—That season I increased from 12 to 56 colonies by buying only one queen. It was a very poor season for surplus honey.

Last year I dug out my cellar about 7 feet deep, and plastered it with water lime, but failed to get it water tight. I put the 56 colonies into it on November 24, and took them out the 30th of March, and the 2d of April the water run in so fast that I took out from 4 to 8 pailsful every day for about two-thirds of the time; and once every two days, the remainder of the time. I made it one of my regular chores.

I ventilated the hives by leaving the entrance open about 4 inches wide and a ⅜ inch bit hole, half way up the front board, and left the top about ¼ uncovered, without a change during the winter. They were tiered up 3 benches high, the lower one being about 20 inches from the bottom of the cellar.

I had a sheet-iron stove in the cellar, and a 5 inch pipe connected with the stove-pipe above the floor. Occasionally during the winter I put in a shaving fire that would heat the stove red hot at once and soon go out. The object of that was to dry the air in the cellar, though I am quite sure I did not do it often enough to do much good.—To ventilate the cellar, I left the draft hole of the stove open, and perhaps two-thirds of the time I left the cellar door open, at night, in the stove room.

The regular temperature during the winter was 48° seldom varying more than 1 or 2 degrees. Out of the 56 colonies which came out alive, and after I sold 1. had 1 robbed, and united a few weak and queenless ones, I commenced the season with 47 colonies.—

I keep my cellar dark, but go into it with a lamp as often as I have occasion to. My experience has exploded many a fine theory, such as: Never disturb them during the winter. Neither have I ever been benefited by winter flights, and have quit it entirely and set it down as an erroneous theory.

Palo, Mich. S. K. MARSH.

For the American Bee Journal.

How I Raise White Clover Honey.

As soon as white clover commences to bloom, divide the strongest swarm. I use the Langstroth hive. It should be done before queen cells are started. Take a new hive, painted like the one you wish to divide, and from the old one remove 5 frames, (½), containing brood of all ages with the adhering bees, into the new one, leaving the queen in the old hive. Put a division board in the new hive, set boxes on the frames, close up ½ the entrance and leave it on the old stand. Remove the old hive 20 or 30 feet away, fill it out with empty frames and the job is done.

In a few hours a large proportion of the old worker bees will return to the old stand, enter the new hive, thus crowding it. They will commence building queen cells in the brood chamber at once, while the surplus bees will be forced up into the boxes, and begin work. By the time a queen is matured the boxes will be filled with nice, white honey. Enough bees will remain in the old hive to keep it prosperous, as it has a laying queen. W. C. TOWLE.

Eugene, Ind., May 7, 1878.

For the American Bee Journal.

Burch *vs.* Novice.

MR. EDITOR:—It is not my desire to excite any ill feelings or controversy through the columns of our valuable BEE JOURNAL, yet, the desire to see fair play prompts a few words on my part; and it certainly does seem to me that Mr. Burch should have borne his loss, in the matter of comb foundation, without calling on Novice to make it good. At that time it was but an experiment, and Mr. Burch could surely only have ordered it as such.

A. I. Root has had to bear a great deal of abuse at various times, and perhaps he deserves some of it, though I have had some dealings with him, and the trade was on the square. But Novice must certainly "rise and explain" about that deficiency in the weight of the beeswax.

Some time ago, the columns of our bee publication contained the announcement that a new work on the honey bee had been published, and the title thereof was a taking one, "Money in the Apiary," and it was to tell us all how to double our profits; and, Mr. Editor, as I had never got all the money that I wanted from my apiary, I forthwith enclosed the desired 25c., and sent for it; waiting anxiously, in the meantime, for its arrival. Just imagine my feelings when I received an envelope, (a common buff one), with my bee book inside of it. I must confess I never felt so badly sold before. The size of it being 3x5 inches, and containing, all told, 19 pages of reading matter and a few advertisements; and one of the most important of its teachings is, that we must re-queen all of our colonies the first thing we do in the spring. And where is the successful bee-keeper who does it?"

Cambridge, Ill. J. V. CALDWELL.

Bee Interests in Los Angeles, Cal.

N. Levering is editing a column called the "Bee-Keepers' Column," in the Los Angeles *Star*, being requested to do so by the Convention lately held in that county, from which we extract the following:

SWARMING

The swarming season is upon us, and from all we can learn bees are casting an unusual number of swarms, but not so large as ordinarily. They seem disposed to retrieve the losses of the past and are spreading out their forces rather thin. One, and perhaps the only reason that can be assigned for this is that colonies generally, were quite weak at the commencement of the working season, which opened upon them quite luxuriously, and inspired their workers at once to action, and her majesty of the hive to active duties to augment her forces to gather the coming bountiful harvest, there being a large surplus of empty comb at her service. We are often asked the question, how to prevent swarming? The only cure that we can prescribe is artificial swarming, or cut out all the queen cells every eight days. Care should be taken to remove every cell, for should there be one left a swarm will certainly follow. Many absconding swarms are passing through the country en route for the mountain of Hepsidam, or a lodge in some vast wilderness. There is no general rule by which the apiarist can tell when they are going to swarm, they often swarm when least expected, and need careful watching from about eight o'clock in the morning till four in the afternoon.

BEE-KEEPERS' MEETING.

Meeting met pursuant to adjournment. President A. J. Davidson in the chair. Minutes of last meeting read and approved. The President stated that he had received a communication from Mr. Wilkins, of Vantura county, stating that there were about 2,200 colonies of bees in that county to begin the season with. Packages for marketing honey was then taken up and discussed. E. W. Sinclair advocated shipping in barrels, ironed hooped and thoroughly waxed on the inside, which he said might be done by bringing the wax to almost a boiling heat and pouring it in at the bung hole, corking up and rolling the barrel quickly, so as to spread the wax in all parts; then turning it out. It would take about one pint to a 30 or 36 gallon barrel. J. E. Pleasants, of Anaheim, stated that the bee-keepers in his part of the county were going to ship in barrels this season. Twenty-six gallon barrels were mentioned as the proper size for shipping purposes, which was concurred in by the meeting. The subject of canning was then discussed. E. E. Shatluck said he had suffered loss from imperfect cases, that during transit they would, from rough handling, require re-nailing, and nails were often driven into the cans, causing leakage. N. Levering said the cases should be strapped with iron. J. E. Pleasants recommended raw-hide. A. J. Davidson said, in soldering cans he made a small orifice with an awl or some pointed instrument which was soldered after soldering the main entrance.

On motion of N. Levering, a committee was appointed to ascertain the respective cost of packages (cans and barrels), and report at the next meeting. The President appointed the following committee: J. E. Pleasants, N. Levering, E. E. Shattuck.

C. J. Fox, President of San Diego Beekeepers' Association, came in and was called upon for a statement relative to the honey interests in his county. He said that the loss of bees in San Diego county the past season was less than one-half; that bees were doing remarkably well, storing honey and swarming unusually; that the beekeepers would make extracted honey, and not comb, as heretofore; and that they had tried, to a limited extent, shipping honey in barrels last season with quite satisfactory results; that where it was shipped by water the barrels should be wood-hooped, as the action of the salt water on the iron hoops would rust them off.

For the American Bee Journal.

Smokers and Sections.

MR. EDITOR :—Once I found fault with the rough frailty of my friend L. C. Root's smoker, also with Novice's 1 ℔. sections.—But I got "churned" a little for it. Well, pretty soon, Novice *himself* must have found fault with the sections, for just as I predicted, he went at it and made them a *little* better. Probably as good as he can.—I will send you a sample section, soon, such as I make with a jack knife, or get some way. Now about

SMOKERS.

Somebody has caused friend L. C. Root to improve his *smoker* also. I have just been using one, and I find it much more solid than the old one, but so heavy as to completely tire out my hand. I have been comparing it with one of Bingham's smallest size, and *some way* the little B. smoker has nearly twice the draft, and is so light and easy to handle, and yet so firm and strong. Much has been said about these smokers, so much that I have been testing different ones for the past few weeks ; and, candidly, and disinterestedly, I think it is as you said. The L. C. Root smoker is an improvement on the Quinby, just so far as it copies Bingham's ; and the copy is so complete and the change so "Binghamized," that, were the shade of the lamented Quinby to visit this mundane sphere, he would say : No, that is not a *Quinby non patented* smoker, it is a Bingham patented, and a palpable infringement, which I never would have encouraged. The addition of heavy cast iron fastenings adds to its weight, but *not* to its strength. As smokers are liable to fall oftentimes, the lighter they are, the less susceptable to injury.

I think Mr. Bingham is away ahead yet, and may justly claim to be the original inventor of a practical bellows smoker, so completely has he revolutionized it. Mr. Quinby took great pains to make the connection tube between the barrel and the bellows *air-tight*; but, since Bingham discovered and patented the principle that the *open air* was the best "tube" to blow through, I notice that the Quinby not only has a very loose fit between the tube and bellows, but actually has holes to let in some of Bingham's fresh air.

Well, to conclude, I will say that I thank friend Bingham for the light, firm, durable and forcible impliment he has given us.—The FIRST practicable bellows smoker, as the old heavy German smoker was too cumbersome, while the Quinby was too frail and imperfect in its action to be of much service after the first week's use. Above all else, let us give "honor to whom honor is due."

Bees about here are swarming, robbing and starving, all at the same time. Precocious seasons, and bees are like precocious children ; at 8 months, they can walk ; at 1 year, talk ; at 4 years, declaim ; at 10 years, they know more than their parents ; at 15, they can run horses, gamble and chew tabacco, drink poor whisky, &c. ; and at mature manhood, just about chew gum, with a string tied to it, and then come home to board with "ma." Many of my colonies of bees have gone to boarding with my 2 qt. feeders. Is this to be the *summer* of our discontent ? It looks so.

JAMES HEDDON.

Dowagiac, Mich., May 18, 1878.

For the American Bee Journal.

Chips from Sweet Home.

We received from A. I. Root 2 dipping plates, with 5 in. comb foundation machine. Gave them a thorough trial for many days, but the wax would stick more or less, although we thoroughly starched, &c. Two women suggested a board ; we tried a small piece. Well, it slipped off nice, so we made 2 plates of pine, planed thin and smooth ; and, to say the least, they are "peelers," *i. e.*, the wax sheets slipped off almost too readily. The boards should be made thin and smooth, of straight grain, with handle on top, similar to other plates. To keep from warping, when not in use, hang in a well or cistern, or lay in a barrel of water. I think, by regulating the thickness of the board, the thickness of the sheets can be evened. Two dips with boards will make as thick sheets as 3 with tins, and cool quicker, *i. e.*, we have to hold over boiler less time to quit dripping. One dip with boards is often sufficient thickness.—Some wood may be better than others.—Try, and report.

D. D. PALMER.

Eliza, Mercer Co., Ill.

Conventions.

Apiculture as a Business.

READ BEFORE THE N. Y. CONVENTION.

Apiculture dates back to the earliest history of our race. Marked notice has been taken of the Bee and Honey in all ages, and it has now become prominent as a business. We have learned that the Island of Cyprus has been noted for the purity and value of its honey and wax; and I hope ere long our own favored clime may possess some Cyprian bees. Bee culture was probably introduced into our country by early settlers, but it received its first impetus as a business about 20 years ago.

By reference to the report of the National Convention in New York, the fact will be discovered that there is a growing demand for honey which will be supplied. We do not now begin to furnish honey enough to supply the increasing market; and yet, some are croaking about glutting the market or overstocking the United States with bees. This idea is so absurd as not to need notice.

True, in this as in all kinds of other business, there are losses, but I mention that for the amount invested, and the care and attention required, no other business presents better prospects for a safe investment and steady gain, with fewer losses.

But what advance has apiculture made within the last 50 years? Beginning with box hives or gums, and obtaining honey by murdering the bees with brimstone, we soon began to use top boxes for surplus. Then Huber came with his hives and articles, in which he explains the natural instincts and habits of the bee. Following him, S. B. Parsons, of New York, was, I think, the first to introduce the Italian bees into our country. Soon we find Quinby, Langstroth and King following with the movable, frame hives, and then apiculture began to appear in a more favorable light and receive more attention.

Next comes the extractor, a valuable invention, without which our bee masters would be lost, and with which honey can be placed on the market at a price which will compete with the finer syrups, and, according to medical authority, honey is much the best to use. Combs can also be saved for future use.

Next comes comb foundation, a most useful and indispensable invention. With it we can save at least ⅛ of the work of the bees, and make use of our old wax, get straight combs and avoid drone comb, where not wanted; and the comb produced by it is more uniform.

Many valuable improvements have been made in bee hives. I am studying the hive question thoroughly, and expect soon to see placed upon the market a hive which shall be more easily and more speedily handled than anything that I have ever yet seen, giving all necessary room for surplus, and being a good hive in which to winter on summer stands. I am of the opinion that wintering on summer stands will be generally adopted. I am watching the experiment of wintering swarms with two queens in one hive, with a thin division board and entrance from opposite sides of the hives; and I hope to find success.

If you are a mechanic, you can make your own hives, or get them ready to nail, and the profits are sufficient; but remember, in order to succeed you must work in this as well as in any business.

Here, on a pleasant summer day, I love to see the countless thousand of busy workers hurrying to an fro, their golden bodies resplendent in the sun, seemingly striving to please their keeper,—and how sweet is their busy hum? Silas M. Locke.

Marketing Honey.

READ BEFORE THE OHIO CONVENTION.

Mr. President and gentlemen of the Convention: At the last meeting, at Delta, it was thought advisable to have certain matters pertaining to our favorite pursuit, (bee culture), discussed at this present meeting in Napoleon, and to that effect there were persons appointed who should address us on the subjects then named, and amongst them the subject of "Marketing honey" was appointed to the lot of your Vice President.

Within the past year much has been written on this subject. If we have a uniformity of ideas, a regular and systematic size of sections, to put up our honey in, of one, one and a half or two pounds weight, and use some system of information by which the members can all be posted in regard to prices of honey, both comb and extracted, we shall be prepared to act and sell understandingly.

If we conclude to ship honey, provided our home market is not competent to the whole consumption, why not have a member of this Convention appointed to confer with wholesale houses and act as an agent for our society, thus disposing of our honey at best regular rates and gaining a fair price for each and every one? To this end the honey should be graded, and every man's sections labeled with his name and apiary, (if he has given it a name), and his residence.

With many there is a fear that the Market will be overstocked, and that the supply will be in advance of the demand. Such has been the cry at every stage of the growth of the country. Look at the orchard. When I was a young man, some fifty years ago, the farmers said, "Plant no more fruit trees; there are too many now; fruit is worth nothing." From that time to the present, millions of apple and other fruit trees have been planted, and I would ask, Is the supply to-day in excess of the demand? We all must answer no; emphatically no!

I went through the city of Toledo and called at the grocery stores to enquire both in relation to the price of apples and honey, as well as to the supply. I found apples scarce—only one kind on the market, and few of them; a third-rate apple in flavor, the Ben Davis, and these brought from the South and West, and the lowest was $1.60 per bushel, by the barrel. What say you, apiarists and farmers, can we not afford to plant more apple trees? Is the supply too great? Not at all! It can be largely increased to great advantage! So too, in regard to honey. Is the supply equal to the demand for good, comb honey, in the best marketable shape? or extracted honey put up in attractive form, for retailing, or for wholesale? I will answer *no.*

On going my rounds, enquiring for apples, I made honey, its quality and supply, my earnest enquiry. What was the result?—Scarcely any—almost none, of a good article in attractive shape! My enquiry was, "Have you any honey to sell?" "A very little." And they showed me a half dozen sections, pasted together, with paper over them; the end one having been taken off, the package, dusty and smoky, had a forbidding look, and instead of being enticing, it was just the reverse. I asked, "How long have you had this?" "Since early last fall. There is little or no demand for comb honey now." I had a section glassed, and showed it to him, and asked, "Can you not sell such honey as this, put up in this attractive form? I can give them to you in a shipping case, so that you can take out just what you wish to sell and keep the balance clean and neat." He was pleased; I saw his eye brighten, and after a little, he said: "*Yes*, I can sell such honey as that, put up in that way! What would you charge me for 100 lbs.?" I said, "$25."—He studied awhile, then said, "I would have to sell it at 30c., but there would be no waste and I can put it in a basket with orders left me, and deliver it as neat and clean as it is now. I guess I will try some, any how."

Here was a man who felt sick over honey; there was *no sale* for it; but as soon as he saw something neat and attractive, he was alive to his interest and would purchase!—I asked him, "What did you pay for that section box you have?" He replied, "Fifteen cts. a lb., but every time I took off a card I got my fingers smeared, and it was always more or less smutty, and I could not keep it clean and neat."

We want to know how to increase the demand; how to get up a market for honey.

First, if comb honey, it should be in neat, clean, white section frames, properly filled and capped, and put upon the market in neat shipping crates, holding, say 24 sections or more, so that they look not only attractive and inviting, but even *enticing!* These sections, if put into frames, can be glassed before or after they are filled or not at all, as may be preferred. Either are neat and handsome. I think I would prefer glassing after filled, if I glassed them at all. I think it would be well to offer them for sale both ways, glassed and unglassed, for when put into the shipping crate, one shows through the glass in the crate about as handsome as the other. The only difference will be with the grocer in sending to the purchaser. He cannot pack the unglassed one in his basket and keep it in shape as well as if glassed.

These refer principally to sections put in broad frames, but can be used for sections, say 5x6 inches, put together closely with a band of paper around them, 1½ to 2 inches wide, which will hold them perfectly secure. These can be placed on top of the broad frames, and when filled can be glassed, the same as those put into frames and placed in the second story of the hive. I think, in either case, tin separators will be advantageous.

In a glassed box you gain much in weight, and the person of taste and means will purchase them in preference to the unglassed, but to create a demand and make a market, you must cut the surplus weight down, so that you can hold out an inducement to the larger class of people; viz, the poorer ones, so as to give them the same amount of honey for less money; and thus, the poor can purchase the same quality, just as neat and clean, and not pay for the glass, which they cannot eat. For shipment, when the shipping case is full, they both remain stationary and reach their destination with uniform safety. These shipping crates have glass sides, so that the neat, clean sections can be seen, and they attract the attention of all who see them; and thus are many enticed to purchase.—Many persons of moderate means, but of good taste, will purchase the glassed sections in preference, when they would not handle the unglassed ones. They look so neat and clean, and really lovely, and so secure from dust that they will say, give me none but the glassed boxes; while the laborer, who never leaves an order, but makes his purchase and takes it along with him, will say to himself, those not glassed are just as clean and neat, and I will save paying for the glass and have more honey, and he purchases and takes it home. The grocer who keeps honey put up in such an attractive form will sell largely, because the eyes of the purchaser admires it; but if such is seen as I described that I saw at the grocery store alluded to above, you may be sure there will be no desire to either purchase or eat it.

Now let me fancy a case, which, no doubt, will be a true one, and will show how to get up a demand. You may go to a grocer who has some honey on hand, rather repulsive looking, and ask him if he wishes to purchase some nice, comb honey, and he will say, *No*; I have some here that I have been trying to sell for six months, and nobody will buy it. No, I do not wish any. Do not quit him or be discouraged; show him a crate filled with such sections as those above described, in the nicest shape for market, and tell him to keep it in the crate and only take it out as he sells it, and that he will very soon be able to sell it. If he says, No, I cannot sell it, leave him a crate anyhow; saying, I know you can sell it. Sell it for me, at such a price. I will run the risk. I will call around in a week or two and see what luck you will have.—After a while you call and find that he has sold the whole crate; and he will say, See here, Mr., I never saw honey sell like that. I kept it where every one who came into the grocery could see it. They say that one of those little boxes is just enough for tea or breakfast. Why, I could have sold, easily, two such crates; next time you come round, bring me 3 crates; I will try more. You do so; he sells them and is now ready for 6 or 8 crates and will tell you that there is no trouble to sell such honey as that, for it sells itself. All a customer wants, is to see it. Now, my friends, you have made a market and a demand right here; and you can do the same with a dozen grocerymen that you have with this one, and the cry will be for more, and your name being on every box, your grocer will say that his customers come in and ask, Have you any more honey with Col. Mann's name on it, or Mr Williams' or Mr. Kepler's or Mr. Clifton's, as the case may be. You see, it is now known, and you will keep this market as long as you will put it up in an attractive form and in the most marketable shape; and as the demand increases, you will be able to secure a better price.

Now, do not think that the supply is in advance of the demand, for not one pound is used where there should be 1000. You say, how shall we accomplish this? I reply, by creating the demand. Can this be done? Most undoubtedly; when you open up new avenues of sale and enlarge the older ones, you will find honey on the table of the poor man and the medium liver, as well as the rich man. You will find at every meal, at the hotel where you stop, nice honey on the table, which now you never see. There is an increase of consumption and consequently an increased demand, and this you do by placing it in the hands of every grocer and provision merchant, even the confectioner, for it will not only look, but be nicer than his candy, and just as clean and neat for him to handle; and in this way you both stimulate a taste for honey, and at the same time create a market, thus the demand and consumption will increase, and where one pound was used, now 1000 will be sold. Never let a grocer keep any honey of your brand that has become dull looking or smutty; rather take it away and give him fresh in its place, or you may lose your reputation as a producer.

What I have just related has taken place, and can be carried out on a large scale, if we are only true to ourselves and offer it to the trade in the best marketable shape.—Your extracted honey should be put up, each kind by itself, the white clover, basswood, &c., and they retail very fast in jars, from jelly cups, &c., up to quarts, &c.—Label all with your name and the kind.

A word about the size of sections. I think we should have different sized sections; say 4¼x4¼, being 8 to a broad Langstroth frame; 4¼x5⅜, being 6 to a Langstroth frame and sections 5x6. The first holds about 1 ℔., the second 1½ ℔s., and the 5x6, say 2 ℔s. A 10x12 glass will cut out 4 pieces for the 5x6 sections. I like these better than Heddon's 4½x6⅜, which I consider a bad size.

In regard to the supply, see what large amounts of honey will be exported from this country by the European demand. In the March number of the *Bee-Keepers' Magazine*, I notice that there is a very small supply of nice honey in New York now, and that there are purchasers advertising for extracted, white clover and basswood honey, and purchasing all they can get, for which they pay 22c. per ℔., cash; and like it all the better if candied. Take this into consideration, with the 100 tons brought by Harbison, about one year ago, to New York city, in addition to the very large amount sent there from the Eastern and Western states, and still the market was good and this great supply did not break it. Does not the prospect look brighter? I certainly need say not, if we only remain true to ourselves, and keep our honey pure and unadulterated and put it into an attractive form upon the market.

Increase our home demand, and our pets (for whom we pay neither rent nor pasture, and who labor for us and board themselves,) will do the work for us, and put up our honey as neat and as nice, and better than it can be done by any other insect, or man even, for it is their province, and instinct given them by the Creator for a wise and good purpose, and for the benefit of mankind. Let us all work, therefore, to create this demand and market. Mr. Heddon says we must maintain an independence in the market, if we wish to succeed. This can be done by creating a demand, and the demand by an increased consumption. I advise all to read Mr. Heddon's article on "Marketing Honey." It is full of sound sense. I have read all his articles, for the past year or two, with much interest. He strikes at the root of all things, and gives many thoughts for the bee-keepers to digest. If what I have penned will produce any good, or stimulate our society to renewed energy in getting up honey in the most marketable shape, and to increase the consumption, I shall be well repaid.

A. Fahnestock.

N. Y. City Bee-Keepers' Association.

The semi-annual meeting of this Association was held April 27th, in room 24 of Cooper Union, New York, J. S. Coe presiding.

Letter from W. S. Slocum read, stating his removal from Brooklyn to Red Bank, N. J., present duties and occupation making it impossible for him to act as secretary, and tendering his resignation. Accepted with expressions of regret, and Ehrick Parmly elected to the office.

Letter from Theo. F. Read, treasurer, read, tendering his resignation, as he could not be present at the meetings of the association and attend to the duties of the position. Treasurer's report read and accepted; but resignation not accepted. He is therefore continued in office with strongest expressions of his value to the association as treasurer, and as an active working member, and keen observer.

Minutes of last meeting read and adopted.

J. L. F. Smith spoke on Article III. of the Constitution relating to fees, and it was resolved that as the treasury is in good condition, and the expenses of the association small and likely to be fully met by the initiation fees of new members, that no further provision be made at present for fees from other sources. Funds in the treasury, $29.14.

The attendance was not large, but all took part in the proceedings, and a number of regrets at inability to be present were received. The reports on wintering showed unusual success, in part owing to the favorable winter, but more to an increase of knowledge on the subject through our journals. J. E. Callbreath wintered 300 colonies without any loss. Others state marked success on a smaller scale; some wintering on summer stands, others in cellars.

The following statement from T. F. Reed, Brooklyn, April 26, 1878, was read: "On April 20, while handling my bees, I met with a strange incident. I had a weak colony which I wished to strengthen, and to that end removed two full frames of capped brood from a strong hive and placed them in the weak one. While I was thus engaged, the dinner bell rang, and in my haste I neglected to shake all the bees from one of the combs before placing it in the hive, and closed the hive and went to dinner. When I came out again I noticed bees fighting on the alighting board. I immediately suspected the cause of the trouble, and upon lifting out some of the frames saw the bees clustered upon the bottom board. I dispersed them with a little smoke, and looked for the queen but could not find her; stepping in front of the hive I noticed a knot of bees on the alighting board of an empty hive near by, and upon examination found it contained the queen. I separated her and she escaped from me into the hive. I opened the hive as soon as possible and found her surrounded by bees, which were trying to bite and sting her. I picked up the bees and queen, and after picking the bees off, I noticed that one of her wings was a little elevated; upon looking under it I saw a bee's sting sticking into her left side just behind the wing and a little below it. With considerable difficulty I managed to extract it, and the wounded side bled. I caged her until the 22d, when I liberated her and she was accepted. I saw her to-day running around on the combs. It is a young queen which I raised this spring, and I think she was fertilized before this took place. I have seen bees stung and die almost immediately, and supposed that this queen would, but she does not seem at all disposed to do so. I have never heard of a similar case. I am very sorry that I cannot be present at the meeting, but hope it will be lively and interesting." THEO. F. READ.

S. Cary, Roselle, N. J., remarks on purchasing bees and his success: "Lost half in wintering." Careful fall examination recommended, and other requisites to success.

The question of stimulating by feeding was discussed. Mr. Cook had not succeeded, Mr. Coe reported marked success, thereby securing surplus from earlier sources than he otherwise would have secured. Feed just enough to stimulate breeding. A trifle more in bad weather, and regularly as to time, but not so much that they will store any. All should be consumed in rearing brood.

J. Van Winkle, Jr., feeds by hanging a frame of honey outside the division board and the bees can take it as they require it. His experience is only of one year. Began with 5 colonies, increased to 17. All now in good condition but one, which had a drone laying queen. Advised to remove the drone laying queen and to strengthen by one or more frames of sealed brood, according to their strength to take care of it, and he would soon have a strong stock and a young queen presiding over it. Feeding can be done to best advantage by giving close attention to the weather, sources of supply, etc."

Mr. Coe—"The end desired is to bring bees in best condition for the white clover harvest, and described his feeder which he places on top of the frames; uses a quilt in place of a honey board. Begins feeding in February, a spoonful twice a day regularly, in bad weather a little more. Recommends all to have feeders and to use them judiciously. Feeds white sugar syrup about the thickness of honey; brings to a boiling point; sometimes put in a little soda. Puts on boxes the beginning of white clover harvest. Some succeed in getting honey stored from fruit blossoms by early feeding. Mr. Read is now experimenting to secure fruit blossom honey from the body of the hive, and will soon report. Bees will not breed much when not gathering stores. One season after white clover, fed three spoonsful a day to each hive, and increased breeding very much and never had such good fall success. One neglected comb, so full of bee bread that moths had not attacked it, I put in a strong colony, and in eight days they had cut it down nearly to the base of the cells, built it out, and stored in it eight pounds of honey. The planting of trees on the road-side and elsewhere for ornament, preference given to those yielding honey was advocated. Much can be done in this direction by the formation of village improvement societies. Basswood, tulip, and sycamore maple particularly recommended.

Mr. Knapp's experience extended over 17 years; has kept from 1 to 12 hives, and has hitherto pursued the box-hive system and killing, but now has 15 colonies, which he thinks combines all the good features of the various hives exhibited at the American Institute. He entered upon a detailed description, which, in the absence of a hive or model, was not very clear. It was therefore proposed by Mr. Crouch that hereafter, all who desired to explain the hive they used, or anything employed in the apiary, bring a model; and Mr. Van Winkle further suggested that at our next annual meeting, each member bring a model of the hive he uses, which met the approval of all present.

This closed the meeting, and the members then held an informal talk on subjects relating to the apiary.

EHRICK PARMLY, Sec'y. *pro tem.*

Albany Co., N. Y., Association.

The bee-keepers of Albany county met at Clarksville, May 11, 1878, and organized a county association. The constitution and by-laws of the North-Eastern Association, were offered, voted upon, and adopted as those of the organization.

The following officers were elected for the ensuing year: President, H. W. Garrett; Vice-President, A. Snyder; Secretary

T. F. C. Van Allen; Treasurer, James Markle. The next convention will be held during the coming fall at Chesterville, Albany county at such time as the executive commitee shall decide upon.

T. F. C. VAN ALLEN, Sec'y.

North-Eastern Wis. Convention.

The Bee-keepers called to meet at Appleton, April 11, assembled as advertised. A. H. Hart was chosen Chairman, D. Huntly, Secretary.

Mr. Hart stated the object of the meeting in a few, well-chosen remarks.

A report was then taken, and a pleasant discussion followed.

Mr. Bishop produced from 58 colonies, in the spring, 9,000 lbs. of honey; 4,300 box, 3,000 extracted, and the rest unfinished comb. Wintered in house.

Mr. Potter, of Calumet Co., obtained 350 lbs. from one hive; 260 lbs. comb, 90 lbs. extracted. Bees not allowed to swarm. He wintered in house, with wire-cloth over the entrance. Counted 30 dead bees, in the spring, from 1 hive.

It was the general opinion that many bees were lost in carrying the dead ones out. Comb foundation was used with the greatest success by many; but it was absolutely necessary to have the wax pure.

It was universally acknowledged that the price of honey must be low, in order to compete with preserved fruits and syrups, and that then there was an almost unlimited market at home, which was the proper and most profitable place to sell.

Mr. Hart stated that bees, this season, commedced bringing in pollen the 30th of March.

Mr. Maryatt gave an instance of a colony that was chilled till apparently lifeless, and was restored by gentle heat; and from which the owner now has 120 colonies.

Chas. Wolcott exhibited a model hive.

Mrs. Dunham, a bee-feeder, of her own invention; also a division-board.

Mr. Bishop, comb foundation.

The North-Eastern Wisconsin Bee-Keepers' Association was then organized, and the following officers elected:

A. H. Hart, of Appleton, President.
R. Bishop, of Sherwood, Vice President.
J. L. Kittell, of Menasha, Treasurer.
Frances Dunham, of Depere, Secretary.

To meet semi-annually. The next meeting to be held at Depere, Brown Co., Wis., Tuesday, Sept. 3.

All county societies are requested to send, at least, 2 delegates; and, if possible, to have their meetings previous to Sept. 3.

There will be important papers read, and discussions upon the proper mode of wintering bees in this northern climate; also the improvement of the home market, &c.

It is earnestly requested that all interested in bees should join the Association, and come prepared to give reports of their production of honey for the season, so that an estimate may be formed of the amount of the summer's yield, and prices settled accordingly. FRANCES DUNHAM, *Sec'y*

Western Ill. & Eastern Iowa Society.

The third semi-annual meeting of the Western Illinois Bee-keepers' Society was held at Burlington, Iowa, May 7 and 8, 1878.

The meeting was called to order at 10, a. m., by the President, D. D. Palmer, of Eliza, Ill. The attendance of members was quite large, and exceeded that of any previous meeting. During the day, 49 new members were added to the roll, as follows:

J. A. Thomas, Mt. Pleasant, Iowa.
Alvah Reynolds, Oneida, Ill.
E. D. Godfrey, Red Oak, Iowa.
George Parks, Muscatine, Iowa.
W. F. Dougherty, Mt. Pleasant, Iowa.
C. F. Healy. Muscatine. Iowa.
H. F. Poggenfahl, Iowa City, Iowa.
S. O. Thomas, Burlington, Iowa.
William H. Smith, Burlington, Iowa.
H. D. Walker, Mt. Pleasant, Iowa.
J. E. Chapin, Oquawka, Ill.
D. Rider, Fairfield, Iowa.
A. Simons, Fairfield, Iowa.
H. M. Noble, Swedesburgh, Iowa.
J. Valentine, Burlington, Iowa.
L. Allen, Wilton, Iowa.
S. J. McKinney, Burlington, Iowa.
G. W. Trimble, Mt. Pleasant, Iowa.
O. Clute, Keokuk, Iowa.
Peter Ness, Burlington, Iowa.
J. Wilson, Springdale, Iowa.
C. T. Penrose, West Branch, Iowa.
Miss Lottie Brayman, Monmouth, Ill.
Loren Hanchet, Burlington, Iowa.
E. A. Hanchet, Burlington, Iowa.
S. E. Taylor, Burlington, Iowa.
Richard Lord, Muscatine, Iowa.
W. H. Furman, Cedar Rapids, Iowa.
R. A. Parker, Abingdon, Ill.
W. G. Latimer, Kirkwood, Ill.
Harmon Brown, Galesburg, Ill.
William E. Bell, Dover, Iowa.
Abner Hanna, Middletown, Iowa.
Charles Whitlock, West Point, Iowa.
John Danley, Monmouth, Ill.
Paul Lange, Burlington, Iowa.
E. T. Gardner, Burlington, Iowa.
Mrs. E. C. Crane, Burlington, Iowa.
Mrs. I. P. Wilson, Burlington, Iowa.
Dr. D. G. Campbell, Keithsburg, Ill.
S. H. Black, Sciota, Ill.
N. Grigsby, Blandinsville, Ill.
G. Kraetzer, South Chicago, Ill.
Thomas G. Newman, Chicago, Ill.
Mrs. William Mercer, Burlington, Iowa.
H. J. Elliott, Burlington, Iowa.
J. K. Brown, Morning Sun, Iowa.
J. C. Shirk, Morning Sun, Iowa.
B. O. Everett, Toledo, Ohio.

The following address of welcome was given by Dr. I. P. Wilson, of Burlington, Iowa:

Mr. President, Ladies and Gentlemen:

It affords me real pleasure to welcome the members of the Western Illinois Bee-keepers Society to the Orchard city—the city of flowers. Burlington does not stand, like Rome, upon her *seven*, but *three* hills, and these are covered all over with blossoming trees and sweet-scented clover, that furnish a bountiful supply of sweetness for the millions of little winged workers, that find a home in our city. And when these supplies fail, they wing their way across the "Father of waters," and gather from the low lands, along the shore of your "sucker" state, new supplies, in time of need.—Truly, this is a fitting place for a bee convention. I am not aware that a meeting of this kind was ever before held in our city. The present occasion is, therefore, one of peculiar interest, especially to those of us who have not had the privilege, hitherto, of meeting in conventions of this kind.

The time has now come when none but "old fogies" work single-handed and alone.

We can no longer afford to get along without our journals, and our conventions.—The time has come when knowledge must not be hid under a bushel, nor locked up in human hearts. Anciently, if a man made a valuable improvement or discovery, he regarded it as private property. He did not seek the columns of a journal or the ears of a convention, to make known to others the advantages to be derived from his improvement or discovery. He did not seek an exchange of thoughts and experiences, as we do to-day.

The eager faces now before me indicate that you are here for a purpose, and I feel warranted in saying that your purpose is not purely a selfish one. While you are here to receive the benefits to be derived from the experiences of others, you are also here for the generous purpose of imparting knowledge.

It seems to me that we may not, as a generation, boast of having more brains than did our fathers of a few centuries ago, but we *may* boast that we live in an age of progression, that superstition, selfishness and secretiveness do not reign as once they did. Men, now, delight more in philanthrophy—more in the brotherhood of man. There is something pleasing in the thought of helping one another. Imparting useful knowledge to others does not impoverish us, but rather it enriches our hearts ; not only so, but the heart of him who receives the benefit is melted into kindness and gratitude ; and so, giving and receiving combine to gladden our hearts and make us happy.

Ladies and gentlemen, I feel that the time of this convention is precious, and I ought not occupy your attention with extended remarks. The "*Mysteries of Bee-keeping*" is, to us, a fascinating study.—How many useful lessons our busy little workers may teach us. The valuableness of time, the importance of energy and activity, and the great good that may be accomplished by persistently doing, little by little, what our hands find to do, are the lessons taught us by their every day lives.

> "How doth the little busy bee
> Improve each shining hour,
> And gather honey all the day,
> From every opening flower."

Our little pets are very diminutive, as regards their physical proportions, but as workers, and as *stingers* they are immense. But every rose, you know, "has its thorn," so has every bee its sting. Handle the rose with care, and enjoy its rich fragrance, and its cruel thorns may not pierce your sensitive nerves. So in handling your bees, do it with confidence, with gentleness, and with care, and the poor little creature's only weapon of defense will seldom pierce your brow.

Ladies and gentlemen, in behalf of the citizens of Burlington, and especially the bee-keepers of this city and vicinity, allow me to greet you, and bid you *welcome, welcome, thrice welcome* to our city.

Motion carried that a committee of three be appointed as a committee of questions and arrangements, which were appointed, as follows : Dr. N. H. Derr, L. H. Scudder, and O. Clute.

On motion, the President and Secretary were added to the committee as *ex-officio* members.

The remainder of the forenoon was occupied by parties having articles on exhibition, in explaining the same. The following were exhibited : Langstroth bee-hives and section boxes, by Kirk & Abbott, Muscatine, Iowa. Tool box, for use in the apiary, by D. D. Palmer, Eliza, Ill. Prize sections and comb foundation, (home made), by L. H. Scudder, New Boston, Ill. Centennial bee-hive, by H. F. Poggenpohl, Iowa City, Iowa. Section boxes, honey, queen cages, grape sugar, &c., by T. G. McGaw, Monmouth, Ill. North Star Hive, Everett's honey extractor, with copies of the various bee books and publications, by T. G. Newman, Chicago, Ill. Extracted honey and frame for nailing section boxes, (Harbison), by Dr. N. H. Derr, Keithsburg, Ill. Model of wire cloth window, for letting out, and keeping out bees from a room, by Will M. Kellogg, Oneida, Ill. Candied honey and sample of glucose, by Chas. & C. P. Dadant, Hamilton, Ill. Bingham smoker and Langstroth hive, by Geo. Bischoff, Burlington, Iowa. Dove-tailed section boxes, from Barker & Tillman, Defiance, Ohio ; presented by Dr. I. P. Wilson, Burlington, Iowa. Advance Bee hive, J. C. Shirk, Morning Sun, Iowa. Concord bee hive, by Krætzer Bro's, South Chicago, Ill.

The afternoon session met promptly at 1:30, p. m. The Secretary read a short history of the Society, from its founding to the present time, and an abstract of its proceedings.

Motion carried that Eastern Iowa be added to the name of the Society.

The following questions were then discussed :

ITALIANS *vs.* BLACKS.

Dr. N. H. Derr.—I prefer black bees.—Italians stick to the combs ; the blacks are much the easiest to get off ; but we can find the queen easier among Italians. It is claimed that the Italians defend their stores the best ; I think the blacks beat them, at that. I think blacks produce finer honey than the Italians ; they breed the best, and are fully equal to the Italians. Italians get better care, hence give better results.

Chas. Whitlock.—Many get humbugged ; get hybrids in place of pure Italians, thus condemning the Italians. I found that my Italians had plenty of honey, while the blacks had but little in time of little honey flow. Italians are inclined to build comb upwards. I think light queens are as good as dark ones.

C. P. Dadant.—I think the hybrids are better honey gatherers—blacks scatter their honey. Italians pack it close, fill up brood chamber and crowd out the brood.

L. H. Scudder.—I think Mr. Derr has been deceived as to the quality of honey.—Italians fill the cells nearer the caps than the blacks, but there is no difference in the honey.

D. D. Palmer.—Italians are a trifle larger than blacks. We should space their combs a little wider apart. A small cluster of Italians will defend their hive as well as a much larger cluster of blacks. In a dry time my Italians bother me, while out searching for honey, while Mr. Derr's blacks did not bother honey close at hand.—I think the Italians are worse to rob than blacks.

T. G. McGaw.—At my place, the blacks are the first to go "nosing" around for stolen sweets.

Dr. I. P. Wilson.—I had a stock of Italians rob out 2 or 3 neighbors' stocks; stored the honey in boxes, while the rest of my stock were quiet.

TO PREVENT NATURAL SWARMING, AND TO SECURE THEM IF THEY DO SWARM.

T. G. McGaw.—I usually divide from the middle to the last of June, put on boxes when clover comes, and clip the queen's wing, if a swarm comes out; cage the queen, move old hive away, put a new one in its place, put caged queen under quilt of new hive and release after the swarm returns. Give old stock a young queen, or capped queen cell. I don't believe in dividing too early.

D. D. Palmer.—I have tried clipping queens; don't like it. My prevention is to give plenty of surplus room, comb foundation, ventilation and shade. Think it a waste of time to return a first swarm. I keep an average of one-half from swarming at all.

IN WHAT KIND OF A BOX SHALL WE PUT UP COMB HONEY?

D. D. Palmer.—First, look to your market. Who is to buy and consume your honey? If your neighbors, almost any shape will do. Cut out in buckets is a good way; but I prefer extracted—no wax for my stomach. Put plenty of honey on your table; make it free to your neighbors when they come in. In the smaller towns, light sections without glass; in the large cities, where they must and will have a fancy article, there is no sale for 6 ℔. boxes and the like; it must be nice, smooth, light sections, glassed on both sides. This package can be delivered around the cities free from dirt and insects. Very few people in large cities go to the stores to get their honey; it is brought to them.

T. G. Newman.—I agree with Mr. Palmer. He has said section boxes *must* be glassed for the city trade. This is in favor of the producer and against the consumer, but if they *will* have it glassed, it is not our fault. Always put on glass after it is filled; it makes a neater and cleaner appearance.

C. P. Dadant.—We sold our honey in St. Louis market with the crate glassed, sections unglassed.

QUEEN RAISING.

"Are queens grown by bees, in natural preparation for swarming, any better than those grown in strong colonies that are forced to raise queens?"

T. G. McGaw.—I have seen just as good queens raised artificially as by natural means.

Chas. & C. P. Dadant.—Would prefer large to small queens. We see no difference, as to prolificness, in dark or light colored queens. We think dark comb produces dark queens, as a rule. We also think the color of honey used has much to do with the color of bees.

W. H. Furman.—I take a full Langstroth hive, divide into 4 spaces, fill with strong combs of brood, and raise my queens that way, and find no difference in prolificness of queens, as to size. Have seen light queens put in black colonies, and turn dark in 48 hours. Would as soon use nuclei to raise queens as full colonies.

WHAT SHALL BE DONE WITH A COLONY HAVING A FERTILE WORKER?

E. D. Godfrey.—Break up the colony, and distribute the combs to other colonies.

W. H. Furman.—Change places with some other colony.

C. P. Dadant.—If a weak colony, break it up; if a strong one, try to save it. Have seen 10 or 12 fertile workers laying at once. Give frames of hatching bees, cage a queen in the hive for a time, then release.

ARE TRIANGULAR BLOCKS, WITH GROOVES CUT IN THE UNDER SIDE, OF ANY REAL VALUE AS MOTH TRAPS?

H. F. Paggenpohl.—I think they are valuable, but keep strong colonies and there is no need for moth traps.

IS IT WISE TO FEED GRAPE-SUGAR TO STIMULATE BROOD REARING, DURING THE INTERVAL BETWEEN FRUIT BLOOM AND WHITE CLOVER?

Richard Lord.—I don't like it, as it fills up the cells with granulated sugar.

C. P. Dadant.—Grape-sugar contains so much matter besides sugar, that when added to wine it injures it; hence, we think it is not good for bees.

At 8 p. m. the session was favored with a lecture from T. G. Newman, of the AMERICAN BEE JOURNAL, Chicago, Ill., on "Honey as Food and Medicine."

SECOND DAY'S SESSION.

Called to order at 8 p. m.

ADULTERATION OF HONEY.

A resolution was presented by Chas. & C. P. Dadant, of Hamilton, Ill., for the appointment of a committee of three, to draft a petition to Congress, to have laws passed against the adulteration of honey and all sweets. This committee is to correspond with the secretaries of all the bee-keepers' societies in the United States, asking them to unite in getting signers to the petition.—The expenses of this committee to be taken out of the funds of the Society.

This resolution drew out an animated discussion, after which the resolution was adopted and the committee appointed as follows: Chas. Dadant, Hamilton, Ill.; T. G. Newman, Chicago, Ill.; O. Clute, Keokuk, Iowa.

WHICH SHALL WE PRODUCE, COMB OR EXTRACTED HONEY?

N. H. Derr.—I think we should produce either, according to our market.

O. Clute, of Keokuk, Iowa, read the following essay:

THE DEMAND FOR COMB HONEY?

Some producers of honey think the demand for comb honey will decrease, and that extracted honey will almost supersede it in a few years; hence, in some quarters there is a tendency to produce only extracted honey. It is well to look at this subject carefully, and not allow ourselves to be led into unwise methods of work, by conclusions formed hastily and on insufficient premises.

1. I have not a word to say against extracted honey. When it is well ripened in the hives before extracting, it is, without question, a superior article. Such good extracted honey, put up in convenient and elegant packages, will continue to sell readily. The demand for it ought to increase, and will increase.

2. But a very large part of the consumers of honey have a strong prejudice against extracted honey. As it comes into the market in the same shape as *strained* honey, and as these consumers are not familiar with the methods of bee-culture, it is only natural that they should rank it with strained honey. This prejudice is, of course, ill-founded. It is a prejudice, which is for the benefit of all honey-producers to labor to remove. Nevertheless the prejudice exists, and will continue to exist in a decreasing degree for some time to come. While it exists, it will keep up a demand for comb honey, which producers will do well to supply.

3. After some years, the consumers of honey will generally come to understand that well-ripened, extracted honey is a most excellent article, that it is just as pure, and of just as good flavor as comb honey of the same kinds. When consumers generally learn this, will the demand for comb honey largely decrease, and finally cease altogether? To this question not a few producers of honey are inclined to say, yes.—But there is another element of the problem, which, I think, they do not sufficiently consider, an element which, it seems to me, will not only keep the demand for comb honey as great as at present, but even increase it much beyond what it now is.—Let us for a moment consider this element. A purchaser goes to a merchant to buy cloth; he is shown different pieces, among which he finds two, of about the same quality, as to durability, but one of them is of finer texture and more elegant finish than the other. This finer piece does not promise to be quite so durable as the other, and it is somewhat higher in price. But in a very large number of cases, the purchaser will choose this more expensive article.—Durability is, with him, not the only quality by which he judges the value of cloth. He wants a garment that will be neat and attractive, as well as durable.—Hence, he is willing to pay a higher price for the fine goods of elegant finish.

A man wants to buy a cow. He is shown a number of animals of about the same age, size, and quality as milkers. He looks them all over, and is sure to pick out the cow that has the points that make an animal beautiful in the eyes of a *connoisseur* of cattle. Other qualities being as good, he prefers the animal that is beautiful, and willingly pays a higher price for such animal. The stock-breeder soon finds that beauty is a marketable quality.

The house-keeper goes to her grocer to buy butter for her table. She looks over his stock. Some of it is not of good color, and has a mussed, untidy look. She passes over this with contempt; but when she sees bright, yellow rolls, solid, neatly shaped, nicely stamped with an appropriate design, she is at once desirous of trying it, and if it is not positively poor in quality, she will buy it. It may not be quite so sweet and delicate in flavor as some of the mussed butter, but its better appearance makes it command, readily, a higher price. High color has become, in some butter markets, so important that artificial coloring matter is freely and openly used to give the butter the desirable tint. The color, the appearance, and the beauty of the butter is a most important item, and has a ready market value. This is so well understood that a large number of dairymen are now turning their attention to the production of a really good, highly colored, often artificially colored butter, which they send to market in ¼ ℔. ½ ℔. and 1 ℔. *prints*, and for which they get a gilt-edged price.

The strawberry is one of the most popular fruits in the market. In the last 25 years its consumption has increased immensely. It is produced in the East, West, North and South. It is found in every market, even in the smaller villages. Let any purchaser go to a fruit stall to select berries for the tea-table, and they will choose those that are largest, plumpest, best-colored, and most beautiful. It is a well-known fact that often strawberries that are most delicious in flavor are not good market varieties, because they are not so beautiful as some other varieties of inferior flavor. Most of the purchasers understand that they are sacrificing something of delicate flavor to beauty of appearance; yet, they willingly pay a higher price for the less delicate fruit.

Indeed, the beauty of the articles which appear upon our tables is an important point with us all. When we sit at our meals, we like to satisfy, not only the appetite for food, but also that love of beauty, which is found more or less in all. In the most humble homes we find the good housekeeper has a commendable pride in the attractive appearance of her table.—The spotless linen, the few articles of glass and silver, the few flowers that she has found leisure to cultivate, lend a ray of beauty to her humble board; and she serves the flood, prepared by her own skillful hands, with as much elegance as she can command. Larger wealth gives greater facility for gratifying this love of beauty, and the tables of the rich often charm the eye with their array of china, and glass, and silver, from the hands of the most artistic workmen, and with viands prepared by cooks with whom their profession has become almost a fine art.

4. There is, perhaps, no article for the table that is more beautiful than the best comb honey. The delicate comb, of fairy-like structure, the crystal-white or golden-tinted honey, of delightful fragrance, are most attractive to the eyes of all. It seems to me that this element of beauty in comb honey will not only keep the demand for it as great as it now is, but as people become

more cultivated and more wealthy, will increase the demand to a large degree. After people become fully educated to the real merits of extracted honey, and after such honey has come into very wide use, the demand for comb honey will continue and increase. Many people will be willing to pay a higher price for it than for extracted honey.

It seems to me that the premises upon which this conclusion is based are correct, and that the conclusion inevitably follows from the premises. It seems to me that the demand for comb honey is a legitimate demand, based upon the intrinsic qualities of the honey; that this demand will be a constant and increasing one.

If this is true, it is wise for producers of honey to prepare to supply this demand in such a way as will be satisfactory to the consumers and profitable to the producers. What this satisfactory and profitable way is I leave to be decided by those who have had wide and successful experience.

Keokuk, Iowa, May 6, 1878. O. CLUTE.

C. P. Dadant.—We favor extracted honey. Rich people can afford to buy nice comb honey, at a fancy price, in fancy boxes, glassed. For the working class, we must put it up without glass and learn them to eat extracted honey—a cheaper and more wholesome article.

HOW TO PREVENT AND CURE ROBBING?

J. A. Thomas.—Place asparagus or other grass over the entrance.

Will M. Kellogg.—Don't handle your bees when they can get nothing from the flowers; give them a small entrance at such a time, and leave no sweets exposed to get them demoralized. I use cold water to break up robbing.

HOW TO CARRY BEES THROUGH SPRING?

Dr. I. P. Wilson.—Keep them from flying as much as possible, shade and keep from the wind; face the hives North; they are less liable to come out and get chilled.

Will M. Kellogg.—Keep them in their winter quarters, as long as we can possibly keep them quiet.

THE DRAWING OF PRIZES

was next in order, 9 more prizes being added at this meeting, resulting as follows:

Prize 1—A full stock of Italian bees, with an imported queen, given by Charles Dadant & Son, Hamilton, Ill.; drawn by L. H. Scudder, New Boston, Ill.

Prize 2—An imported queen, given by Charles Dadant & Son; drawn by G. Krætzer, South Chicago, Illinois.

Prize 3—An imported queen, given by Hardin Haines, Vermont, Ill.; drawn by T. G. Newman, Chicago, Ill.

Prize 4—A queen, bred from an imported Cyprian queen, given by Hardin Haines; drawn by H. D. Walker, Mount Pleasant, Iowa.

Prize 5—A tested Italian queen, given by T. G. McGaw, Monmouth, Ill.; drawn by Dr. D. G. Campbell, Keithsburg, Ill.

Prize 6—A dollar queen, given by T. G. McGaw; drawn by E. D. Godfrey, Red Oak, Iowa.

Prize 7—One dozen Sweet Home raspberry plants, given by D. D. Palmer. Eliza, Ill.; drawn by H. J. Elliott, Burlington, Iowa.

Prize 8—One plant each of the following named raspberry plants—Doolittle, Mammoth Cluster, Golden Thornless, Seneca, Miami, Ganargna, Brandywine, Philadelphia, Lumb's ever-bearing, Davidson's Thornless and Brinkley's Orange, given by D. D. Palmer; drawn by Miss Susan R. Meadows, Abingdon, Ill.

Prize 9—A double portico Langstroth bee-hive. complete, cap covering both porticoes, honey board, full set of section honey boxes, with shipping crate for same, given by Kirk & Abbott, Muscatine, Iowa; drawn by W. H. Furman, Ceder Rapids, Iowa.

Prize 10.—A Langstroth hive, given by George Bischoff, Burlington, Iowa; drawn by M. T. Sharp, Oquawka, Ill.

Prize 11.—A tested queen, or 2 settings of buff Cochin or Bramah eggs, given by Charles Whitlock, West Point, Iowa; drawn by D. D. Palmer, Eliza, Ill.

Prize 12—A setting of partridge Cochin eggs, given by H. D. Walker, Mount Pleasant, Iowa; drawn by D. Rider, Fairfield, Iowa.

Prize 13—A pair of Pekin ducks, given by W. H. Furman, Cedar Rapids, Iowa; drawn by N. Grigsby, Blandinsville, Ill.

Prize 14 -Two dozen Brandywine raspberry plants, given by Paul Lange, Burlington, Iowa; drawn by Harmon Brown, Galesburg, Ill.

Prize 15—A two-story Concord hive, given by G. Krætzer, South Chicago, Ill.; drawn by Alvah Reynolds, Oneida, Ill.

Prize 16—A fourteen frame Langstroth hive, given by Richard Lord, Muscatine, Iowa; drawn by S. E. Taylor, Burlington, Iowa.

Prize 17—Two choice roses, given by Peter Ness, Burlington, Iowa; drawn by J. Valentine, Burlington, Iowa.

Prize 18—"Manual of the Apiary," given by T. G. Newman, Chicago, Ill.; drawn by Dr. N. H. Derr, Keithsburg, Ill.

After the drawing of prizes, Dr. R. L. Robb, of Burlington, Iowa, gave the following analysis of grape sugar, proving the article to be adulterated and unfit for use.—

SAMPLE A.—John Long—Partial Analysis.—This sample, as seen under the microscope, contains dextro-glucose starch (unchanged), pipe-clay, and a very few particles of pollen from buckwheat and sugar acari. By heat test. Rotary power the same at all temperatures plus 56°. *Hence contains no levulose.*

SAMPLE B.—Chas. Dadant & Son—White clover, crop of 1877.—Heat test at temperature 15° C. minus 25°; at 52° C. minus 13°; at 90° C. the sign changes to plus; hence contains levulose and glucose. The rotary power of glueose does not change at any temperature.

A vote of thanks was given the Dr. for his remarks.

The discussion of questions resumed.

HOW MUCH, AND WHEN SHALL WE USE COMB FOUNDATION?

Will M. Kellogg.—Would only use narrow strips for guides and starters in section boxes, and narrow strips for guides, or full sheets of it in the brood chamber, used in medium or light colonies, or in outside frames of strong colonies. Would never hive a swarm on to full sheets of comb foundation. Like foundation very much.

L. C. Axtell.—In using comb foundation in a heavy flow of honey the bees thin it out nicely; in a light flow, they leave the "fish bone" in the centre. Would only advise its use in the brood chamber.

Adjourned to 2 p. m.

AFTERNOON SESSION.

SECTIONS AND SEPARATORS.

"How shall we place the sections on the hives, and what shall we use as separators to secure straight combs?"

T. G. Newman exhibited a Comb Honey Rack, filled with Prize Boxes, so constructed, that, by removing a wedge, all the sections and tin separators are loose and free to take out. He favored this style of using Prize Boxes. Tin is, by far, the best material to use for separators; paper, as proposed by some, will not do; bees gnaw it to pieces.

Others favored using an upper story, with the sections fitted into larger frames.

WHAT IS THE BEST METHOD OF ITALIANIZING AN APIARY?

E. D. Godfrey.—Buy an imported queen and raise your own queen, or buy one dollar queens.

D. D. Palmer, would use about the same plan.

DO TOADS EAT BEES?

T. G. Newman.—Toads *do* eat bees; there can be no doubt of it. It is so reported from almost every section of the country.

N. H. Derr.—Have seen toads catch bees, and once saw a fish catch a bee.

HOW CAN WILD BEES BE CAUGHT?

D. D. Palmer.—Place an empty box or hive near the location of wild bees; have a hole in it, with a tube run in near the centre of the box. Place sweets in the box, and they will find it and fill the box. Leave the tube out the first day; next day, catch the box full, then remove to a new location and give them some brood.

IS A BEE HOUSE PREFERABLE TO A HIVE IN THE OPEN AIR FOR THE PRODUCTION OF HONEY?

J. A Thomas.—I prefer the hive, by all means. Have tried the house business.

D. D. Palmer.—For queen raising, the house does well; otherwise, not.

CAN TWO LAYING QUEENS BE KEPT SUCCESSFULLY IN THE SAME HIVE?

Chas. Whitlock.—Years ago I would have said no; think differently now. Have had a black and Italian queen in the same hive for several weeks; experimented with it, had queens in two cages, and after 48 hours put both in one cage; after a time I released both, and kept them both in the same hive for over 3 months.

WHAT IS THE BEST METHOD OF EXTRACTING HONEY, THE BEST PACKAGE FOR MARKETING IT, AND HOW SHALL WE INCREASE THE DEMAND FOR IT?

N. H. Derr.—Use a two-story hive, and put on an upper story as soon as honey flows freely; take out full combs, put in empty ones, take to room and extract; and so work with all your hives. Don't extract till most of the comb is capped over.—Would ship to a distance in barrels, and would put in stone jars for home trade.

O. Clute.—Mr. Dadant uses tin pails for shipping and selling extracted honey.

IS IT ADVISABLE TO PAINT THE INSIDE OF A HIVE.

Several thought not.

The following resolutions were presented and unanimously adopted:

Resolved, That we appreciate the kindness of the proprietors of Turner Hall for generously giving us the free use of their hall for our sessions, and that we thank them for the same.

Resolved, That the hearty thanks of the members of this society are tendered the citizens of Burlington for the cordial hospitality extended to us at this meeting.

Resolved, That the genial presence of Thomas G. Newman, the able editor of THE AMERICAN BEE JOURNAL, has added much interest to our meeting; that we tender him our thanks for his able address on "Honey," and that we commend him and his journal to the good favor of all bee-keepers.

Resolved, That Thomas G. Newman be appointed a committee to see the commercial editors of the Chicago dailies, and represent to them the importance of quoting *extracted* honey in their reports.

Resolved, That the earnest and efficient service of our able Secretary, William M. Kellogg, deserves, and hereby receives our most grateful recognition and thanks, and that we hereby authorize our Treasurer to present to him, in our behalf, an imported Italian queen bee, to be selected by Mr. Kellogg.

The society adjourned to meet at New Boston, Ill., October 12, 1878.

D. D. PALMER, *Pres't.*
WILL. M. KELLOGG, *Sec'y.*

Southern Kentucky Convention.

This Convention met at Glasgow Junction, Ky., on May 7th, and was well attended.

Meeting was called to order by Dr. N. P. Allen, at 10 a. m. After the reading of the minutes of the last meeting, which were approved, questions of general interest were asked by those desiring information, and answered by those who had experience.

Judge Dulaney asked how much cold it would take to kill a queen.

Dr. Allen said they could not stand much cold or neglect; in cold weather they ought to keep covered by the other bees; the older the queen the more cold she could stand; they should be put in the brood nest to keep them from being neglected, and explained the mode of raising queens, answering all questions pertaining thereto.

Mr. W. Cook wanted to know why the bees brought out so many bees and threw them away. Judge Dulaney stated that he had examined those that were brought out and thrown away and always found that they were in some way or another imperfect and were thrown away because they were of no service.

The following communication from Thos. G. Newman was read and ordered printed with the minutes:

MARKETING HONEY.

COMPANION APIARISTS:—If there is one subject of greater interest than another to every keeper of bees, throughout the length and breadth of the country, that subject is —"How to put up our Honey, in order to *command* the highest market price."

Heretofore, we have spent our time at Conventions, discussing such topics as the following: "What hive shall we use?"—"Which race of bees is the best—the natives or Italians?" "What extractor shall we adopt?" "Shall we winter our bees in or out of doors?" "Shall we build bee-houses?" and many others—all important and proper—but of vastly minor importance to that of "How shall our Honey be prepared for the Market, in order to *command* the highest price?" Truly wise was the remark of "one of old:" "These things ought ye to have done, and not to have left the other undone!"

Since last spring, the prices of honey has been steadily tended downward. Amidst *all* this depression, alike common to all products, what held up so unwaveringly the price of that honey prepared for the market by those "Kings of the East,"—Capt. Hetherington, G. M. Doolittle, N. N. Betsinger, C. R. Isham, and others? The answer is—unexcelled quality, single-comb boxes and uniformity in packages !

In order to sell honey, it *must be attractive!* The large boxes of " yesterday " have passed into history—they are now required no more—while the " rising sun " of promise is Prize Boxes, in crates containing one dozen of these unicomb packages.

We are fond of " *object lessons*," and to enforce this thought, we have a few facts that have, within a month, come under our own notice. As the *facts* are all that we require on our lesson board—the party shall be nameless, as well as the State in which he resides—albeit he is something of a bee-keeper, and withal a good man ; and if many may profit by his experience, we feel sure he will not object to being placed before the " class," to-day.

Our friend informed us that he had sent us some 600 pounds of comb honey, desiring us to dispose of it for him, to the best advantage.

It was packed in straw, surrounded by inch board slats ; each package weighed, say from 50 to 75 ℔s. The straw preventing the Railroad employes from seeing what the boxes contained, of course, they pitched and threw them about as they usually do such packages, until they had broken down three-fourths of the combs, and got them to leaking quite badly. Then they tore away the straw and helped themselves generally to the " sweets " therein contained. Of course, it was received in a deplorable condition. Arriving at the Store just as we were closing up for the night, it was carefully laid in single file on the floor till morning, when something like 25 ℔s. of it stood in a pool on the floor. We proceeded at once to unpack it, and upon discovering how it had been prepared for the market, we were not astonished at the waste and leakage, though we were pained to see it.

Old starch and glass boxes, and such as could be packed up around any country grocery, had been given to the bees, in which to store their " surplus " honey.—They presented a varied and ludicrous appearance. No care had been taken to have the combs built straight, nor had the bees indulged in that kind of luxury. A few surplus, shallow frames had been used, but even they contained combs built so crooked as to be inseparable.

The boxes varied in height, from 3 to 7 inches, and in size, from 4 inches square to 2 feet square, or its equivalent, varied by size and shape. We will describe one of them accurately : It is 1 foot square and 3 inches high. One of its combs being 12 inches long, 3 inches high and 2½ inches thick. Something like a dozen of the largest combs are candied solid, and all are irregular and very uninviting. Had this Honey been put up in the 5x6 one-comb boxes or sections, and crated, one dozen in a crate, it would have brought, at least, 10 cents per ℔. more, and the leakage of one hundred pounds would have been saved. The glassed boxes or crates would have permitted the Railroad men to see what it contained and they would have handled with more care. From $60 to $80 was squandered in this one transaction !

Let these *facts* enforce the necessity for unicomb boxes and uniformity in packages and crates. All will readily see that it would have been far more profitable to the producer, and infinitely more attractive to the consumer, had it been properly prepared for the market.

To cure this evil, let the East and West, the North and South unite in the demand that one-comb boxes or sections of uniform size be everywhere used, and when shipped to market, let it be done in the Prize Crate. Let us study uniformity and attractiveness, and everywhere enforce it.

In New York, white clover, comb honey, of the best quality, is quoted in Prize Boxes and Crates at 25c. per ℔., while precisely the same kind, grade and quality, in 4 to 6 ℔. boxes, is quoted at 21c. per ℔. ; a difference of 4c per lb. in favor of the former !—The reason is obvious. Small, single-comb boxes or sections will sell at retail, at least, ten times as fast as the 6 lb. boxes—hence the demand for them. This is a powerful argument, and one that touches the pockets as well as the pride of bee-keepers, and should lead them to right conclusions.

The great honey marts of the country have closed out all their stocks ! No first-class honey can now be obtained, either in the East or West—only the undesirable lots remain unsold, and even these are getting scarcer every day. If we will but meet the requirements of consumers, there need be no trouble about selling all the honey that can be produced on this Continent. The demand must and will increase yet a hundred fold, and peradventure a thousand fold within a short time. Aye, even now

> " That good time is coming,
> It hasteth nigh."

Extracted honey should be put up as attractively as comb honey, for it is just as good, just as useful, and just as desirable as when in the comb. The world needs information on the subject of Honey, and its uses ; and to us, perhaps, is given the duty of imparting that knowledge. Let us, therefore, see to it that our work is done promptly and well. Your friend and co-laborer. THOS. G. NEWMAN.

Several communications were then read, after which the books of the Association were opened for membership, when the following gentlemen joined the society: Judge W. C. York, G. T. Parker, Thos. McGoodnight, W. J. Whitlock, J. L. Smith, J. L. Garvin, Edwin Moore, Chas. Renfro, A. D. Boyd, I. W. Sterritt.

The appointment of committees being next in order, the President made the following appointments:

ARRANGEMENTS.—I. N. Greer, Judge W. C. York, Joe Adams.

EXHIBITIONS.—W. Cook, J. W. Wright, J. W. Scribner.

STATE OF BEE CULTURE.—Judge W. L. Dulaney, Bob Munford, J. T. Gray.

QUESTIONS FOR DISCUSSION AT THE NEXT MEETING.—H. W. Sanders, J. W. Holman, W. T. Sears, Dr. N. P. Allen.

Mr. W. Cook being called upon for a speech, said he thought a general discussion of matters before the Convention of more importance than a set speech, and upon being asked, " What is the best honey-producing plant," said he was a novice in the business, but like some of his friends, had caught the bee fever; thought white clover was the best plant known in this country for bees to feed on; said it grew wild abundantly in this section, and saw no reason why this should not be a great bee country; thought that the pear tree did not produce much honey; believed that the bees thought the cherry tree a good place to gather their sweets; wild plums were good; the poplar furnishes the most of our honey, and was sorry that the poplar trees were being destroyed so fast, no insect prayed upon its foliage; the North and Northwest had other trees that produced honey, but did not know whether they could be utilized in this country or not; all of our forest trees produce honey; blackberries, raspberries, both black and red, furnish honey to the bees; knew no plant that bees are fonder of than the raspberry; never noticed whether they liked the grape vines or not, but would judge they did; the strawberry did not furnish much honey, but thought white clover and the poplar the best plants that grow in this country for bees to get honey from.

Mr. B. Munford thought bees needed as much attention as anything raised on the farm; it was as necessary for them to be supplied with what they needed as for any of the other things raised; regarded white clover and poplar as the most bountiful nectar producers known in this section. If the weather was not propitious during the time the white clover and the poplar were in bloom, the bees would not get much honey. He gave an instance of his own observation. One day he set a pair of scales under a bee hive, and the bees during the day increased the weight of the honey 19½ pounds, all of the increase he thought was made from white clover and poplar.

Dr. Allen said alfalfa was not a good honey producer; buckwheat is one of the best honey-producing plants we have; the linn furnishes more honey than all the blooms in the country put together; had seen it nearly drip with honey; knew of one tree that had furnished 16 gallons of honey in one season; red clover was a very fine honey producer but our bees can not reach the nectar.

The Association adjourned for dinner. A bountiful repast was spread in the chapel by the good housewives of the bee-keepers, and the bee-keepers partook of it as busily as do their bees of the sweets of the flowers and plants. Every one after filling himself with the best the land affords was ready to see the practical transfer of the bees by the committee that had been appointed by the President. Mr. W. W. Wright, J. W. Scribner, Jas. Garvin, Nat. Holeman, a committee, followed by all who wanted to see them transfer, repaired to the residence of Judge York, where they removed a hive of bees from one hive to another without arousing the anger of the bees, and without a single insertion of the little sting of a bee into any of the disturbers.

At the appointed hour, the afternoon session assembled and proceeded to business. The selection of a place for the next meeting being in order, Horse Cave, Gainsville and Drake's Creek Church were put in nomination. By balloting, it was determined to hold the next meeting at Horse Cave, on the first Friday and Saturday in November next. Next in order was to receive the reports of the committees. The Committee on Exhibition made the following report:

There are on exhibition from T. G. Newman, Chicago, Ill., the following: Bingham smokers ; yellow comb foundation ; Van Dusen's bee feeders ; King's Text-Books ; glass honey jars ; Emerson's binders ; Muth's bee veils ; Alley's smokers ; Cook's Manuals; honey knives ; registering slates, &c.

W. COOK,
J. W. SCRIBNER,
W. W. WRIGHT.

The committee on the state of bee culture made a report as follows :

Your committee on the state of bee culture, beg leave to report that the good honey crop of last year has created much more interest in the culture of bees than has been felt in a long while, and the bee journals and effects of bee conventions have taught the people how easy it is to have plenty of honey, as well as to grow it in such attractive shapes as to advertise this industry, not only in the markets, but among people who have known bees all their lives and have not known before their capacity.

W. L. DULANEY, *Ch'n*,
ROBERT MUNFORD.

The committee to whom was referred the matter of selecting subjects for debate at the next meeting, made the following report :

We, your committee, would respectfully report the following questions for debate at the next meeting :

Will it pay to raise bee pastures for bees alone ?

How can we prevent the bees raising brood in top story ?

How thick should we make our hives to winter bees in ?

How many colonies of bees can one man attend to properly ?

Shall we change our bees into new hives every spring to clean them out ?

How shall we preserve our surplus combs during winter ?

H. W. SANDERS,
W. T. SEARS,
J. M. HOLMAN,
A. D. BOYD,
JAMES L. GARVIN.

It being on the programme for Hon. W. L. Dulaney to make an address on "The Pleasure and Profit of Bee-Keeping," he entertained the audience for about 30 minutes in his happy and original style, making a speech that was as interesting to the children present as to those well versed in the art of bee-keeping. He said he had the finest pack of hounds in the State; he kept fox dogs as a sanitary measure; so far his bees had not been very profitable to him, as he had given all the honey he had taken from them to ladies to compensate them for the damages done their flower beds by his hounds.

The speech of Mr. Wm. (Fish) Cook, on "Bee-Keeping—the Past, Present and Future," was carefully prepared, and was received by the audience as a rich treat. He told all about bees, from the first one that was created down to the one he saw that morning extracting honey from a bloom of white clover. He thought there had been a wonderful improvement in bee-keeping and looked for a still greater improvement in the ruture.

On wintering bees, I. N. Greer, W. Cook, Bob Munford made appropriate remarks, each one telling their experience, all of which corresponded in the main.

Dr. Allen said he had better success marketing honey in small glass boxes; it sold more rapidly than in large quantities. Mr. W. T. Sears said he sold his honey in large caps, in tin cans, and in any shape and quantity he could.

Dr. Whitlock, on the question "How far bee hives should be placed in the apiary," said it made no difference as to the distance. W. W. Wright said bees should be placed some distance apart. Dr. Allen said it was best to have them at least 6 or 8 feet apart. Mr. Munford said 12 or 15 feet apart would be the proper distance.

RAISING AND INTRODUCING QUEENS.

The President remarked that many methods had been tried, and that there was a difference of opinion as to the best mode of raising queens; said he had abandoned the small nuclei hive for queen-rearing, and used the Langstroth hive instead; said by putting in division boards he could raise three queens at the same time, in the Langstroth hive. Two division boards would divide the hive into three apartments, with as many places for the bees to enter; he had one entrance in front, one in back end, and one on the side of the hive. Each apartment should have a separate honey-board so the bees would not pass from one apartment to the other while manipulating them; said he formerly unqueened a hive, in order to get queen cells; the queen being removed, the instinct of self-preservation would force the bees to construct a number of queen-cells; the number depending upon the strength of the colony and richness of the bee pasturage. Said he would take a sheet of empty comb about two-thirds full and put it in the brood-nest of his choice colony of Italians. About ten days before he put them to rearing queen-cells; that he preferred a comb with plenty of larva and eggs in it, and the frame not being full of comb, they would construct their queen cells on the lower margin of the comb, and the cells were easily removed.

To get cells built he removed a strong colony to a new place and put an empty hive on the spot where the old hive stood; done this about 9 or 10 o'clock in the morning; he would then go to his choice hive and remove the comb that he had placed there with the adhering bees (being careful not to remove the queen), to the empty hive on the old stand, placing it so he could put empty comb on both sides of it; close up the hive and the bees that were out would make a strong swarm, and would in 8 or 10 days build and cap the cells. The nuclei should be set up a few days before the cells are ready to be removed, so the nuclei hive should be placed where it is to stand; then go to a strong hive and get a sheet of comb with brood, being careful not to have more brood than the bees can keep warm and cover; a small quantity of brood is best on the start. Put one or more combs, with adhering bees, in each apartment, leaving the queen in the old hive; get a large per cent. of young bees, as the old bees will return to the old stand. Young bees can be added to nuclei at any time by removing a comb from an old hive and shaking or brushing the bees off at the entrance. The young bees will remain and the old will return to the old stand.

On the tenth day he would remove the cells, by cutting them out with a knife, being careful to not cut or damage the cell; said he cut an inch or more from the cell; he then cut a piece of comb corresponding in size with the one the cell was on, out of the center of the brood comb in the nuclei, and introduced the cell in its stead, he then closed up the nuclei. But before putting in the cell, destroy all queen cells with the point of a knife that are on the comb; in a few days the queen would hatch, and as soon as she commenced laying eggs she was ready to be introduced to any colony of bees desired. Said she was then what is called an untested queen, a pure Italian, but we don't know what kind of a drone she met, whether it was an Italian or black drone. To test a queen you must keep them until the brood hatches, and that will take about 21 days from the time the egg is laid. Said the swarming season was the best time of year to raise queens. It required experience to be successful in raising queens. Said queens could be raised whenever the weather was warm and there was honey in the flowers and drones in the hive.

He introduced his queens by putting them in a wire cage and hanging the cage between the brood-combs. Of course the queen to be superseded has been removed and all queen cells destroyed. He would release the queen in 12 to 20 hours, by removing the stopper from the mouth of the cage, and tying a piece of newspaper saturated with honey on both sides, over the mouth of the cage, and hanging the cage in the hive; the bees would cut the paper off and release the queen; he preferred to release her about sunset, as the bees were more quiet then.

After adopting the following resolutions the Association adjourned to meet at Horse Cave on the first Friday and Saturday in November next.

Resolved, That we tender the thanks of the Association to the good people of Glasgow Junction and vicinity for their hospitality and kindness displayed on the occasion.

Resolved, That the Glasgow *Times*, Bowling Green *Pantagraph*, *Farmers Home Journal*, and the AMERICAN BEE JOURNAL pe requested to publish the proceedings of this meeting.

N. P. ALLEN, *Pres.*

H. W. SAUNDERS, *Sec'y.*

Our Letter Box.

Chenango Co., N. Y., May 22, 1878.

"Our 52 colonies of bees have destroyed their drone brood, and have driven out their drones, in consequence of honey dearth, caused by our late cold weather. Fruit trees bloomed about 25 days sooner than usual, and raspberries, locust, and some other flowers of less importance, promised to follow in quick succession; but they are so injured by frost that they will be but very little earlier than they usually are.—Bees were making preparations to swarm, and we should have had some issue had the weather been fine, about May 20. They will not swarm until June 25th, if they do at all. We expect white clover about the first of June. We shall work our bees for honey, and prevent swarming as much as possible." CHAS. G. DICKINSON.

New Canton, Ill., May 16, 1878.

"The JOURNAL grows better and better every month. No bee-man can afford to do without it." JOHN BARFOOT.

Marcellus, N. Y., May 14, 1878.

"The hills were covered with snow on the 12th inst.; the thermometer stood at 27° Fahrenheit." N. N. BETSINGER.

Platteville, Wis., April 13, 1878.

"Very cold; heavy frost this morning; thermometer 25 above zero. Bees have had a poor time of it on the fruit blossoms; too cold, and rain." E. FRANCE.

Carson City, Mich., April, 12, 1878.

"My 170 colonies wintered well; the season is 6 weeks ahead of anything for 7 years. Swarming will commence by May 1st, if this weather continues."
HIRAM ROOP.

Marengo, Ills., May 16, 1878.

"Season has been good for fruit blossoms which have now lasted three weeks, but are about done, and bees are killing drones."
C. C. MILLER.

West Chester, Pa., April 30, 1878.

"The long storm has prevented the bees from gathering much honey from the apple blossoms, and these are now about over. I had several ready to swarm when the storm commenced, but they have changed their arrangements and broken up."
E. PENN WORRALL.

Lawson, Ray Co. Mo., April 25, 1878.

"Bees are doing well here this spring.—One of my neighbors had a large swarm to come out on April 17; not thinking it a natural swarm, returned it to the same hive, and on the next day they came out and went to the woods. I then made an examination, and found the hive full of brood, in all stages, and several queen cells sealed over. I have 150 colonies very strong." J. L. SMITH.

Hillsboro, Ill., May 14, 1878.

"On the 14th of March last, pursuant to previous notice, those interested in the culture of bees, in this and adjoining counties, met in this city and organized a Bee-keepers' Association by adopting a constitution and by-laws, and the following officers for the ensuing year, viz: I. B. Shimer, President; E. Armstrong, Vice President; Wm. K. Jackson, ; Secretary and Wooten Harris, Treasurer. Twenty-four persons gave their names as members."
W. K. JACKSON, *Sec'y.*

Strawtown, Ind., Jan. 21, 1878.

"In the JOURNAL for February, 1877, I gave a description of my cellar for wintering bees. In the warm weather of that month I gave the bees a flight. They remained out a week or more, and flew every day. The 2 nuclei started brood, as did all the colonies. When the weather turned cold again, about the first of March, all were put back in the cellar, where they remained till the last day of March. When they were taken out again, both nuclei and 2 colonies were dead. They had suffered more during March than all the time before. While out in February, they started brood, and the food taken to feed them had decayed till all were more or less depleted in numbers. We transferred the blacks that we bought about Christmas, while they were out in February, and killed their queens and united them with weak colonies of Italians, so as to have them Italianized early. The cellar was a success in comparison with our former efforts in wintering.—Out of about 50 colonies, only 2 were lost; most of them came out in very fine condition. I sold 10 of them to a neighbor for $120 and bought 20 of Mrs. Grimm for the same amount, and never bought as strong colonies before, and never dealt with anyone more prompt or accommodating. I commenced the season with about 55 colonies, and sold some 20 during the summer, making about $250 worth of sales altogether. We also sold about 500 lbs. of honey and have wintered 100 colonies in the cellar. We also have our nuclei, about 40 in number. All are wintering very nicely, so far. We aim to take our nuclei through, so as to commence queen rearing in the spring, just as it stopped in the fall. Our comb honey was readily sold at 20c., at our county seat, beside honey said to be from California. They prefered ours after trying both." JOHN ROOKER.

Wrightstown, Wis., May 4, 1878.

"After being burnt out last summer, I again rebuilt my dwelling house, and made a large cellar with double walls of brick and stone; thinking I had a sure thing for wintering my bees. But it was late before I got it done, and the fall being rainy, I could not get it sufficiently dry; but I run the risk of the damp, and put 43 colonies into it, all in splendid condition, and lost all but 2. The queens seemed to be the first to die. My cellar was well ventilated, and the temperature even. I covered them with quilts and filled the caps with fine, dry straw. It was either the scent of the lime and cement, or the coloring in the cloth with which the quilts were made of. I have purchased some more hybrids of the widow Grimm, and intend to fill them up again this summer." CHAS. R. CLOUGH.

Woodman, Wis., April 22, 1878.

DEAR EDITOR:—"Your pamphlet on 'Honey as Food and Medicine' is at hand. It is a step in the right direction. What we most want now is a market or demand for our product, for no one will care to keep bees long after keeping them ceases to pay, so that is what we are all after. I raised, last season, 6000 lbs. of honey, and have sold 4000 lbs. of it in my home market. I find the great drawback with extracted honey is to convince the people it is pure, when you sell it to them for less than you do comb. It looks suspicious. I have often been asked how it was that I could do all the extra work of extracting, &c., and then sell it so much less. I have one customer that has bought honey of me for 3 years, yet every little while he wants to know what I put in my honey to make it as good as comb honey, and yet sell it so cheap. When I explain the process, and saving in comb, most men will understand and accept the explanation. I have been thinking of getting some circulars printed with some appropriate heading like this, perhaps, 'To the lovers of pure honey;' and then go on and explain the process of extracting, and the advantages, and leave them in the stores for distribution, endeavoring to post the public as to why we could furnish a pure article of extracted cheaper than comb honey." H. F. WALTON.

———

Baraboo, Wis., May 9, 1878.

"Bees have done well until now; cold today, very. My Italians threw off a large swarm the 5th, and that without stimulation. Bees are strong. Drones have been flying for two weeks." WALLACE PORTER.

———

Dundee, Ill., May 24, 1878.

"We have been literally over run with orders, and have worked almost day and night. Our whole page advertisement in the AMERICAN BEE JOURNAL is the *cause* of it. It is the best investment we *ever* made. Look out for a "spread" next year."

J. OATMAN.

———

Scott Co., Ill., May 25, 1878.

"Boxed 4 colonies April 15, 3 May 20; none worked in the boxes till the 21st. inst., and now combs are built to the bottom in many of them. The section boxes, put on in trays or crates, seem most attractive to the bees and are ahead. Perhaps they are more accessible. White clover is abundant." WM. CAM.

———

Waverly. Mo., May 10, 1878.

EDITOR AMERICAN BEE JOURNAL:—"It seems that you and 'Novice' don't altogether agree. I am more than pleased with the stand you have so promptly taken.—His erroneous ideas and conclusions have long been a source of annoyance to many practical and well-informed bee-keepers."

ALSIKE.

———

Peoria, Wyoming Co., N.Y., May 8, 1878.

"Your pamphlet on Honey as Food and Medicine, was duly received. Thanks. It seems to be just the thing to open the eyes of both producer and consumer to the value of honey as an article of food, not as a luxury only, but a *staple*, supplied by nature in her most beautiful form—the nectar of flowers. It can but be received with favor by all lovers of this delicious sweet."

C. R. ISHAM.

———

Stevensville, Mich., May 8, 1878.

"I wish to tell my experience in stopping bees from going to the woods. Twenty-five years ago, more or less, my father kept bees in Western New York, and having lost several swarms by their "lighting out," an old man told us to shoot among them. The next swarm was hived, but didn't act like staying, so I loaded my little shot gun and didn't have long to wait before out they came, and I kept ahead of them and fired away. Four shots in perhaps as many minutes caused them to alight, 6 or 8 rods from their starting place, and they were hived and did well. Another swarm undertook to go, and got about 10 rods on their way before we got a shot into them. Ten rods farther another shot was fired, and they soon alighted on a tree and were hived and taken back. Oil up your old shot-guns, friends, load with powder and 'wad,' only, blaze away and report. A neighbor had a swarm come off the 6th inst."

A. C. OWEN.

———

Hamilton, Ills., May 6, 1878.

"Please inform N. C. Mitchell, through your paper, that his patent on division boards is useless and void. We used division boards with cloth or rubber edges in 1869 and ever since, and can prove it. His patent is too late for any purpose."

CH. DADANT & SON.

[True; but are not the rubber strips on these division boards worse than useless, friends Dadant? Certainly, we have no use for them! As before stated, let us repeat—simple division boards are neither patented nor patentable.—ED.]

———

Northville, Mich., May 11, 1878.

"The smoker came duly to hand, and works to a charm. Thanks for promptness. We have had bad weather during the last 3 weeks for the bees. It has rained nearly every day, and ended with a good frost last night. One of my neighbors lost 21 colonies of bees out of 50 since the 1st of April. He says that they dwindled away to a handful before the queens died, and some of them had brood in the cells when the queen died. but took no steps to raise another. Some of them would swarm out of the hive and go off. The combs are clean and good; some hives having 30 lbs. of honey in them after the bees were all dead. He wintered on the summer stands, without any protection."

RANSOM ALLEN.

———

Los Angeles, Cal., April 30, 1878.

"I have received your pamphlet on 'Honey,' and find it very interesting. My bees are mostly Italians, some hybrids, none blacks. I have, at present, about 90 colonies. They are doing first-rate. The copious rains we have had this season have produced a great abundance of wild flowers. The white sage is coming out finely, and will commence blooming in a week or two. We expect a good honey harvest, though, of course, not as large an aggregate as formerly, on account of the great loss of bees last year. The newspapers say, that out of 25,000 colonies of bees there were only between 5,000 and 6,000 left in the county at the beginning of this season."

WM. MUTH RASMUSSEN.

———

Ft. Worth, Texas, May 13, 1878.

"I am a reader of your valuable JOURNAL, and have learned to love it. I found one of my colonies without a queen this spring—killed by moving in wagon about 70 miles. We put in brood from a strong colony and raised a queen; she is doing but little good in an official capacity. I have sent for an Italian and hope to succeed better with that. I use the Langstroth hive, and the only trouble I find with it is, sometimes, a difficulty in getting out the frames without injuring the comb and bees, and the probability of killing bees in examination, &c., particularly in putting on the top or upper story, and the cover. Can you point to any hive with all the advantages of the Langstroth hive, with the additional advantages alluded to ?"

Albert L. Rust.

[Yes ; the new Langstroth with manipulating side, described elsewhere in this number of the Journal, "fills the bill," exactly. There is no necessity of killing a bee ; and no good bee-keeper will consent to use a hive whose general character may be summed up by being called a "bee-killer."—Ed.]

Farmington, Minn., May 4, 1878.

"My bees, 51 swarms, wintered safely, and the season being early they are unusually strong for this time of the year. I am glad the reputation of the black bee is gradually taking its proper place. When I read in the Journal friend Alley's and others' glowing description of the merits of the Italians, I think there must be one of two things: either they have different Italian bees, or I have a better race of black bees. In poor seasons for honey, the black bees always do the best." L. E. Day.

Jonesboro, Ills., May 3, 1878.

"I began the season with 12 colonies, bought 6, transferred all but 3, and increased to 24 by natural swarming. My first 2 swarms came off a little over 3 weeks ago; they were very large. I put them in 2-story Simplicity hives. One swarm has filled both upper and lower story, in all 18 frames, 8 of which are filled with honey, which is being capped over. The honey is obtained from the tulip trees, white clover and raspberry. The two latter are just in their prime. The other colonies are doing equally well, according to their size. Is that not an encouraging prospect for a beginner? This is my first season of bee keeping for profit."

W. J. Willard.

[Yes, it is quite a flattering report. All beginners cannot expect to do as well.—Ed.]

Louisville, Kansas, May 21, 1878.

"I commenced the season with 3 colonies, (hybrids), have increased by natural swarming to 8 colonies. The first swarm came off on the 25th of March, and without ceremony left for the woods. The season here, so far, has been very good ; bees are now carrying in honey and pollen from the raspberry, which is plentiful here ; when that fails, I suppose they will take a rest, as forage is scarce during the month of June, and presume they will dwindle considerable until the prairie flowers come into bloom. I hived a second swarm 10 days ago. This morning I found the queen outside the hive, dead, with no eggs or brood in any of the cells, and very few bees, although, when hived there was not less than 3 quarts. I see hundreds of dead workers, and some drones around some of my other hives, and cannot account for their rapid dwindling, unless it was these bees trying to incorporate themselves with other colonies, and have been destroyed.—And again, how is it that there were no eggs in any of the cells, presuming the young queen that led off the swarm was fertile ? What little knowledge I have of bee-keeping, I owe to that most excellent publication, the American Bee Journal." Jas. D. Chadwick.

Delaware Co., Pa., May 16, 1878.

"I have 41 colonies of bees, and my brother 8 ; they are all in very fine condition. I have 30 in Dr. Worrall's Centennial hive. I have 4 different hives in my apiary, but prefer his. I have the old and new American, but think they do not winter as well as in Centennial hives. I like my extractor very much, and thank friend Muth for introducing such a valuable machine.—I think every bee-keeper should have one. I had one colony commence to rob the other, the 28th of April. The colony that was robbed did not try to resist the robbers. Both colonies were very strong. The weather has been very unfavorable for this last week, that is, from the 8th to the 16th of May ; if I had not fed some strong colonies, they would have perished. But they were carrying honey from white clover, for the first, to-day. Will give you full report of bees and honey crop this fall."

J. Halbert Williamson.

Delhi, Jersey Co., Ill., April 15, 1878.

"With the spring again returns active interest in our bees. Those who keep their bees principally for the money they make out of them, are beginning to try to peer into the future, wanting to know what the summer will bring forth, what the prospect is for a good honey crop, and the profit they will propably realize on their bees. They, like their bees, are getting ready for the gathering of the harvest. Everything is done that should be done at this season of the year. New hives are made and well painted. Honey boxes are stored in a convenient place, to be ready when needed, and all the hives have been examined, to ascertain if any were queenless. The busy time is now just about beginning, both with bees and bee-keepers. Already we have many young bees hatched and flying, and drones hatched and many more capped. Our queens are fast filling their combs with brood, and if the remarkably early spring continues we shall soon start nuclei. We have wintered our bees on the summer stands, and in opening them, this spring, was very much surprised to see how little honey they had consumed, owing partly, we think, to the very mild winter, and partly to the hive we use. And right here, as you have the advertisement in your Journal, I would say a word in favor of this hive: Armstrong's Centennial, *I* believe, is the best hive in use. It is perfectly adapted for all purposes. In using it, there is no need ot nucleus hives, as they are very easily converted into nucleus hives, and if necessary, two can dwell in one of them, separated by means of a division board. By means of side sections, bees are almost forced to make box honey ;

and by raising the side sections on top, when partly filled, they readily go to work in them. Being double-walled all over, they are good for both winter and summer; and being so constructed that the sides and back come off in one piece, leaving the frames resting against the front, and exposing at once the whole brood chamber, without having to lift them out at the top. It takes very little time to examine a hive and find out its exact condition. I do not believe, at any time of the year, that the time occupied in finding a queen will exceed 5 minutes, and nearly always much less. As it is now time to form nuclei, and as I was often vexed last summer by queen cells not hatching when introduced into them, I wish to call attention to a fact which I observed then in regard to them:—One day, in introducing 5 or 6, I noticed that in shaking them gently, I could put the young queen loose in several of them.—None of those in which the queen would 'shake' would hatch. I tried it several times afterwards and not a single one of this kind would hatch. This little discovery will save me a great deal of trouble this summer, as I shall throw all such away and not waste time on them. I would ask some of your readers to try this and report. I have the light colored Italians, and am trying all the time to get them lighter, as I keep bees more for recreation than profit, and have never tried to ascertain whether the light or the dark ones give the best results. Mine gave me about 50 lbs. of surplus last year, and it was not a good year for honey gathering, in this locality. I increased 100 per cent."

W. O. LANGDON, M. D.

South Haven, Mich., May 20, 1878.

"To answer lots of questions let me say, the term 'dollar queens' is used in contradistinction to 'tested queens.' They are not tested, but shipped as soon as fertile. By offering 'pure Italian queens' we simply meant queens that were reared from mothers of undoubted purity, and possessing in some degree the most desirable qualities of the Italian race. While it was our aim to sell queens at a low price, reared from the choicest stock obtainable, we could not guarantee pure fertilization. We may add, however, that during the past 3 years, while there has always been a few black bees in our immediate vicinity, fully 80 per cent. of our young queens have been purely fertilized. We have always reared queens in full colonies, believing such a plan insures more vigorous and long lived stock; and we deem it to be of equal importance that all queens should be started from *just hatched* larvæ, instead of larvæ 3 days old. Our favorite method of introducing queens we give as follows: Remove the old queen, spray both the queen to be introduced and the bees and combs, thoroughly, with sweetened peppermint water, and put in the queen at once. Our idea of successful re-queening is: Don't let the bees know they are queenless. This method has given us the most unbounded satisfaction, and we use it even to introduce imported queens. With us, it saves time, trouble and disappointment." HERBERT A. BURCH.

American Bee Journal.

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We do not send goods by C. O. D., unless sufficient money is sent with the order to pay express charges both ways.

When ordering Extractors, give outside dimensions of frame or frames to be used, length of top-bar, width and depth of frame just under top-bar.

In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

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We will send a tested Italian Queen to any one sending us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. Premium Queens will in every case be tested.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce. Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send us any small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

THE AMERICAN
BEE JOURNAL
Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, JULY, 1878. No. 7.

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☞ The Texas Horticultural and Pomological Association hold their fourth annual exhibition on July 17 to 19, at Houston, Texas.

Editor's Table.

☞ Lemonade made with honey, and used freely, is an efficient remedy for dyspepsia.

☞ The unfavorable weather during the early part of June, caused the destruction of many young queens, who were ready for fertilization about that time.

☞ Comb Foundation is being used very generally this season, if we may judge by the quantities called for at this office, amounting to between three and four thousand pounds, already.

☞ A snow storm in Perthshire, Scotland, on June 11th, seems to indicate that the cool weather which prevailed in this locality was not exceptional. If a snow storm in June is disgusting to the human family, it must be doubly so to the tiny bees, who then reasonably expect to revel in the bloom of thousands of fruit trees and millions of flowers ! !

☞ We have received a nice lithographic view of the residence and bee-yard of the Hon. H. S. Van Anglen, near Waverly, LaFayette Co., Mo. He calls it "Orchard Place," and we should think it rightly named, from the many trees there exhibited. It is a perfect minature "paradise," where the bees as well as the honorable family ought to be, and no doubt are, as happy as it is averred our primogenitors were in the original "Garden of Eden." It also adorns our museum.

Surplus Boxes 40 Years ago.

So much has been written about the invention and use of surplus boxes for honey, as a very recent contrivance, that a relic of 40 years ago, sent us by friend W. W. Lynch, of Maysville, Ky., will be interesting to our readers. It is a copy of Fishers' *Farmers' Almanac* for 1839, by John Armstrong, A. M., professor of mathematics in Franklin College, O. It is published by Robert Fisher, in Wheeling, Va, On page 32, we find the following on the

MANAGEMENT OF BEES.

The Kennebec, Maine, agricultural Society, at their meeting last autumn, awarded their premium on bees to John Gilmore, who furnished the society with the following statement:—"Having entered my name for premium on honey and a hive for bees, I will inform you how I have managed them for some years past. I keep them in boxes—my boxes are 13 inches square on the outside, and from 6 to 7 inches high, with thin slats across the top about an inch wide, with just room to let the bees pass between them.—For a young swarm I fasten 2 boxes together, with a board on the top, put in the swarm, and when I set them on the bench, put under as many more as I think they will fill—a large early swarm will fill 4 or more. I had some this season that filled 3 in about a fortnight, and then swarmed, and the young swarms have filled 4 boxes.—After my old hives have swarmed once, I usually put under one or more boxes. I prefer this course to letting them swarm again, for second swarms are generally worthless. When the weather becomes cool, if the hive is well filled with honey, the bees will all leave the upper box; it can then be taken on without disturbing the bees in the hive. I usually take from my old hives and early swarms one box, containing from 50 to 54 lbs., and leave enough for the bees to live on during the winter, or I can take a part and return the box if I think the remainder is sufficient for them. If my bees grow lazy after the swarming season is over, and hang out on the hive, which is in consequence of the hive being full, I add more boxes. I had a few swarms which I have taken up otherwise. I have not destroyed any bees. I have taken up on my own farm this season 289 lbs. of good honey in the comb; and I now own, including including those I have taken up, 26 hives.

Where is Gillespie, with his new patent on two-story hives? He ought to have collected a "Royalty" of John Gilmore in 1838, (40 years ago), for using a two-story hive. He put a 6 or 7 inch story over his breeding apartment, which was 13 inches square, and obtained his surplus comb-honey in these "boxes," which had slats or bars across the top, an inch wide, "with just space enough to let the bees pass between them!"—there is a bar-hive, with 1⅜ inches between the bars or slats. These he also "tiered up," too, as some now do. He was a *progressive* bee-keeper, with advanced ideas; and obtained from 50 to 54 lbs. of comb-honey from a hive, good enough to exhibit at an agricultural fair in Maine, in the year 1839! Good enough!

◆

☞ A subscriber in Alabama wishes to know how to be able to tell when honey is adulterated. Almost all extracted that will not granulate is adulterated. The latter is not as sweet—tastes more like starch, and lacks the pungent aroma of the flowers for which the genuine is noted.

◆

☞ We have received the "Dunham Rack" or Case to hold sectional boxes. It is an ingenious contrivance for expanding the limits of a story for hive having cases with close-fitting top bars, thus admitting ease in manipulations. It can be used under a 7 inch cap; or by nailing strips on, can be tiered up as high as wanted, or used with a 3 inch cap. It can be closed with hooks, but Mrs. Dunham says she prefers wires, as they are the cheapest, and can also be used as handles, and in lifting the case they draw all firmly together.

◆

HOW TO WINTER.—Those who wish to post up on the subject of wintering, will do well to read Prof. Cook's essay as read before the National Convention of 1876.—Price 15 cents.

Adulteration of Sweets.

Resolutions Passed at Burlington by the Western Illinois and Eastern Iowa Bee-Keepers' Society, May 8, 1878:

Resolved, That under the name of committee against the adulteration of sweets, a committee of three members be appointed, viz., a President, a Secretary, and a Treasurer.

Resolved, That this committee be instructed to prepare a petition to Congress, and to send a copy of this petition to each of the members of this Convention, with a request to have it signed by the bee-keepers and people at large and returned.

Resolved, That the editors of the bee journals of the United States be asked to insert this petition in their columns, with request to each of their subscribers to take the trouble to have it copied, posted in their postoffice for signature, and sent to the Secretary of said Committee on Adulteration.

Resolved, That said committee be instructed to have an understanding with the Secretaries of all the other bee societies, or bee conventions, through the United States, in order to obtain of such Societies a move in the same direction.

Resolved, That the first expenses incurred by said committee be paid out of the treasury of our Society, and that all other societies be asked to help in the same way.

Mr. Dadant stated that this motion was put before our Society because of the enormous amount of sweets, and especially syrups, sold to the public that were nothing but glucose. He had gone to the best drug store in Keokuk to ask for a sample of glucose. As they did not have any, they told him that they would inquire where it could be found. At his next trip to town they asked him if he had found any glucose any where. He had not. They then told him to go to a grocery anywhere and ask either for New Orleans molasses or golden syrup, or even for maple syrup, and that he would get glucose.

They informed him that he could easily test it by putting a little of it in tea and that it would turn the tea black. He bought 3 samples in different groceries. All turned the tea black. This is on account of the amount of sulphate of iron contained in glucose.

It was thus evident that the people were being poisoned, or at least more or less injured, by wholesale, through this adulteration of inoffensive sweets. This adulteration was also practiced on honey

He remarked that it was just as much the interests of the government to stop this fraud as to stop the counterfeiting of greenbacks; for the one injured the health of the people as much as the other injured their wealth.

It is of course to the interest of bee-keepers to have such laws established, as the large sale of this spurious article in syrups and honey injured the sale of the better and healthier sweets throughout the country.

He stated that this would be only following the example of England, France and other nations, who very justly decided that the liberty of a man ends where it is prejudicial to the welfare of the community. If such laws were passed, making it a criminal offense to offer any sweets under any but their real name, and a few of the adulterators were sued and punished, this would at once stop the sale of any but the real articles, and would permit these wholesome articles to be sold at a sufficiently remunerative price, and it would also be very beneficial to the public health.

C. O. D.—If all were inclined to do just right, and were honest, it would be safe to deal or "dicker" in any convenient way. To send by express, C. O. D., seems to be a very simple and honest way to order goods—but, alas, for human nature, some thoughtlessly order heavy goods in that way that should go by freight, and when they find the amount charged for expressage is so large, they simply refuse to take them Then we have to pay the charges both ways in order to get the goods back and save ourselves from further loss. All can see at once the injustice of the thing—so in future we shall be obliged to refuse to send goods by express C. O. D. Let no one feel hard with us on that account. We would like to do otherwise—but *dare* not.

PREMIUM QUEEN.—To the person forwarding to the Editor of AMERICAN BEE JOURNAL the largest number of new subscribers up to the 1st day of October next, I will present one of my choice Gold-Mine Queens. The Editor to be the judge.

Rome, Ga. A. F. MOON.

Honey Markets.

NEW YORK.

There is no change in the condition of the market during the past month, and prices are still quotable as follows:

Buckwheat Honey—comb	8 to 12c
Strained or extracted	8 to 10c
Clover—in comb	15 to 25c
" extra	8 to 12c

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY.—The current quotations for good to choice comb, are ranging at 11 to 12c. ⅌ lb; common and dark colored lots at 8 to 10c. and choice extracted honey at 8 to 10c.

BEESWAX.—In fair request at 24 to 26c. per lb. for prime choice yellow. No new honey offering yet.

CINCINNATI.

COMB HONEY—In small boxes, 15@20c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz,, $4.50; per gross, $50.00.

C. F. MUTH.

CALIFORNIA.

HONEY.—Our honey crop will be large, and being located far away from a market, we must find one for our large surplus production. We look to England and France for a market, and when our wheat ships move for European ports, so will our honey. Prices will be established. The stock of extracted honey is now pretty liberal. There are small orders in the market, and as prices are now more settled, they probably will be filled this week. Comb honey is less plentiful than extracted, but prices are settling. We quote: Comb honey, white, ⅌ ℔., 11@13c.: dark to medium. 8@10c. Extracted, dark, ⅌ ℔., 6@7c.; choice, 7½@8c.

BEESWAX.—Supply and demand correspond, both light; at 25@27½c.

STEARNS & SMITH, 423 Front St., San Francisco, Cal.

Standard of Excellence.

In response to our plea for deciding upon a standard of excellence for Italian bees, we present the following:

Elizabethtown, Indiana.

FRIEND NEWMAN:—Your idea of wanting bee-keepers to agree upon a standard of excellence of the Italian bees suits me. I hope you will keep this thing before the bee-keepers, as I think we should be able to settle this matter during next winter. The trouble is, some prefer dark and some light-colored bees. I have the light-colored bees. I think they are just as good for work as the dark ones. My customers say that my bees are prolific and *very* industrious. I will, at some future time, give you my opinion as to what *pure Italian* bees are; or, at least, what we should all breed for, as to color, markings, &c. I have been offered $1 each, for queens that I pronounced hybrids, but I prefer to kill them. Think there are too many of this kind. JOS. M. BROOKS.

True, friend Brooks, there are too many hybrids sold for Italians now.—But why didn't you give your opinion of what they should be, instead of promising it sometime—that is "too thin." "Now is the time and this is the place." Speak.

Polo, Mich., June 16, 1878.

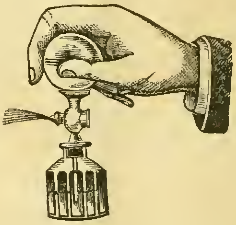
MR. EDITOR.—As you make a call for a standard of excellence in Italian bees, I will tell you what I think it ought to be: The queen should have a *bright yellow* abdomen with a black point. The workers should have three *bright yellow* bands behind the waist, with a very narrow dark edge. The drones should have 3 very broad, *bright yellow* bands on the back, below the thorax, the sides of abdomen a *bright yellow*, and should be all uniform. If I was on a committee to establish a standard of excellence, I should define them more minutely in some other points. S. K. MARSH.

Well done, friend Marsh, you started well—but *why* say *if* you were on a committee you would define them more minutely in some particulars. You are already on a committee; so define thoroughly—exhaust the subject.—Next.

A man who has sold lots of bees to his neighbors for Italians, called on us a few days ago, and wanted to see ours. After examining our *pure* Italian bees, he said he never saw such before. His were not marked at all like them.—Query:—What kind of bees was he selling for pure Italians? Will any one say that there is no need of agreeing upon a STANDARD by which all may be tried, and thus save imposition?—If there be such a one, let him now speak out.

The Chicago Atomizer.

At the request of several who want a perfect means of spraying combs, bees, &c., for the cure of foul brood, as well as for changing the scent of bees when introducing queens, dividing, making nuclei, &c., we have procured a nice little thing, called the CHICAGO ATOMIZER, which we can sell at the low price of $1. If sent by mail it will cost 30 cents extra for postage. The above engraving shows its shape and the manner of using it. See page 241 for a description of its use in the cure of foul brood, though we would suggest a trial of the following formula, and its repetition on the sixth day, to prevent a return of the epidemic:



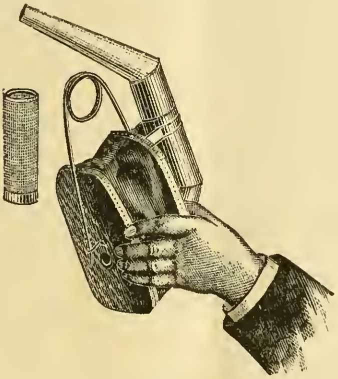
Salicylic Acid	128 grains,
Soda Borax	128 "
Bromo Chloralum	64 "
Pure Rain-Water	16 ounces.

◆

GLASS, WITH CARE.—Friend Chas. Simon, of Swan, Ind., has sent us a surplus honey box, made entirely of glass—6 pieces in all, *i. e.*, 2 pieces of each of the following sizes: 4x4¾; 1¾x4; and 2x4¾. It has four very small pieces of wood, simply to strengthen the joints. It looks well—would show off the honey to perfection, but we should think the great draw back would be the extreme care needed in shipping. It certainly makes the neatest appearance of any box we ever saw.

Excelsior Bee Smoker.

In last month's Journal, on page 176, we noticed a smoker made by Levi Sutliff, Charles City, Iowa. We now give the following illustration showing its shape and general appearance. As friend Sutliff thinks we did not give a correct idea of it in the Journal for June, this cut will certainly correct any false impression made. In saying it was 3 or 4 times as large as ordinary smokers, we meant, of course, in the operations of the bellows. Its bellows is 4⅝x8 inches, and has a three-inch motion. The Bingham bellows is 5x6 inches, and has a motion of just one-half, or 1½ inches. The tube of the Bingham is less than 12 inches in length, while this is 20 inches in length. These points gave us the *enlarged* idea of this new-comer.



The tube is 1¾ inches in diameter. The fire-part is 5 inches long. The little tube at the left of the smoker is the cartridge, which may be filled with rags or any other material that will burn, and then put it into the fire-tube, and it is ready for operation. It is advertised in this Journal, and may be had either of Mr. Sutliff or at this office.

☞ The teasel will be in bloom when this Journal gets into the hands of its subscribers, and it will last about four weeks. An acre will support about 10 colonies.

☞ Among our many callers during the past month were Mr. and Mrs. F. F. Collins, of Dallas, Texas, who are spending a few days in the city. They report prospects for honey crop as very favorable in that State, and brought a sample of their extracted honey. We had a very pleasant visit with them.

Bees in Southern Wisconsin.—A correspondent of the Milwaukee *Journal of Commerce*, writing from Milton, Wis., under date of May 31, says:

> The men who handle the little insects that "improve each shining hour, and gather honey all the day, from every opening flower," together with the rest of creation, have met with misfortune this season, owing to the cold, damp weather during April and May. There are two men in this town who have quite extensive apiaries, and although their bees wintered well, they have lost a large number since taking them out of winter quarters. One of them, who put one hundred colonies in the cellar last fall has now less than fifty.

Yes; but now the fine weather of the past 10 days has put the bees to work with a will. Our correspondents, nearly all through this Journal, have been telling a sorry tale. But now, in all probability, their faces are wearing a smile of joy—the delightful weather vieing with the merry hum of the bees to make their cup of joy almost to run over. True it is of dame Nature, that

"Behind a frowning Providence
She hides a smiling face."

☞ Many have heretofore sent honey to commission men in this city to sell, and often never receive any returns for it. We know of several such cases now. They sell it, pocket the money, and you can't collect anything of them. There may be good men in that line of business, perhaps many—but the American Bee Journal cannot recommend any of them. Should any one desire us to sell their honey for them, we will cheerfully do so, or we will exchange supplies or anything we have for sale, for good honey in prize boxes. We want no other, and we will pay the highest market prices for such honey.

Smoker, Tin Corners, &c.

"I send you, by mail, a smoker and specimen of tin corners, and methods of fastening foundation and frames, which is very easy and quickly done, even by a novice. Care must be taken not to drive the nails so tight as to cut the foundation.

The smoker is made without any solder to melt, and the lower stopper cannot drop out, with fire and all. It has the advantages over the bellows smoker, as both hands can be used while smoking. They can be mailed at 35 cents.

We welcome your. valuable paper, which has visited us for 10 years, every month.

The prospects for honey are extra good. Hundreds of boxes are now almost full." F. H. CYRANUS.

The smoker is intended to be held in the mouth. The tube is 2x5 inches, with a cone-shaped end, 2¼ inches, making its total length 7¼ inches. It has perforated tin partition to prevent the fire from issuing from the tube.—For a mouth smoker, it is the best we have ever seen, but we cannot imagine that any one would *prefer* a mouth smoker to one to operate with the hand. We have no such preference—others may, and for such, friend Cyranus has "just the thing."

The tin corners overlap the frame and are nailed to it. They are made of pieces of tin 2x1½ inches long by 1½ wide, which are bent to fit the top bar of the frame running down ⅝ of an inch on either side. These edges projecting ¾ of an inch over each end of the frame, form the rests to hold it in position, making it very strong, and not allowing them to be fastened down by the bees.

Friend Cyranus' method of fastening foundation into the frames is to rabbet the top-bar out ¼ of an inch from one side to the centre, place the foundation against the piece left, and press a strip of wood, ¼x⅝ of an inch, (being just the size of that rabbeted out,) close to the foundation, nailing through both with small brads. Of course, it cannot get away.

Nearly all the trouble with comb foundation may be accounted for either by its *not* being fastened firmly to the top-bars, or from its not being put into the frame with the strong way of the foundation in a perpendicular position. To ascertain this—hold a piece of foundation up, and look over it; it will be easy to discover small ridges running one way across it. In placing it into the frames, these should always run from top to bottom—never the other way.

In passing through the rollers, while making it, they press together so closely as to make very thin parts between every row of cells. It is impossible not to see this when holding a piece horizontally between the eye and light from a window. Every machine now used makes it thus—but we have a promise of a new machine before next season that will avoid this weakness. Whether it will come up to the promise or not, time will tell—and the JOURNAL will inform its readers. We advise those intending to purchase machines to await the developments of the next few months. Inventive genius is at work, and something beneficial may be the result.

☞ We have received a letter, consisting of questions to be answered, that would, if framed and glazed, be interesting to beholders. It is written on one side of a half sheet of paper, but contains 91 words so inaccurately spelled as to be almost unintelligible.

☞ That Prize we drew at the Burlington Convention came duly to hand a few days ago. It was offered by Hardin Haines, of Fulton Co., Ill. It was to be a Cyprian Queen. She came in good order and was at once introduced into one of the colonies of the BEE JOURNAL apiary. She is a fine looking queen and is laying profusely. We shall report her progeny in our next month's JOURNAL.

☞ The third annual Exhibition of the Iowa Industrial Exposition will open at Des Moines on Sept. 4,—keeping open for one month.

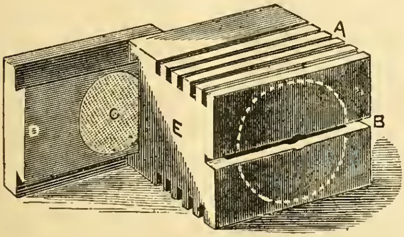
California Honey.

N. Levering writes to the Los Angeles *Star* that parties who are reporting enormous yields of honey there, this season, are doing so for the purpose of running down the price of honey. He adds:

"The honey crop this season in Southern California will doubtless be a little over the average. The amount of honey that will be thrown upon the market will not exceed that of two years ago, as the great mortality among the bees last season has greatly diminished their numbers. 'The harvest is great and the laborers are few.' We would advise bee-keepers to hold for more remunerative prices, where circumstances will permit. The shipments that will be made to Europe this season, and the new uses that are being made of honey must certainly increase the demand. It is no longer a doubt that a good quality of sugar can be made from honey, and it will not be long until the demand in this direction will add much to the pecuniary interest of the apiary. Apiarists have no reason to be discouraged, but keep up a cheerful hum like their little pets, and labor for a higher and broader development of this pleasing and interesting science, when a dawning future will amply reward their toils."

Scovell's Queen Cage.

In our last issue we mentioned friend Scovell's all-wood queen shipping cage. We now present an engraving, and will more fully describe it.

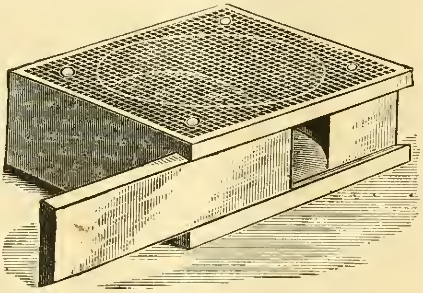


It is 1⅝x1⅝ inches, outside, and stands 1⅝ inches high. *D*, represents the sliding cover: *C*, the sugar provision; *A*, exhibits saw cuts, similar ones being on the opposite side, serving for observation as well as ventilation; *B*, shows a saw cut across the bottom, but we notice that Mr. Scovell has omitted it in those subsequently sent to this office; the dotted lines on the bottom indicates the relative size of the augur hole inside, which comes to within ¼ of an inch of the bottom, and forms the cage.

It is exceedingly neat and strong, and makes a desirable Queen Shipping Cage. They can be obtained at this office in any quantities.

NOVICE'S QUEEN CAGE.

As several have requested us to give a cut of this queen cage, we have pleasure in giving it, in this connection. It is also a very neat and convenient cage. It stands one inch high and is about 2 inches square. It is provisioned with candy before the wire-cloth top is fastened on. This we also keep for sale. See price list on third page of this JOURNAL.



COATING FOR HONEY BARRELS:—M. E. McMaster has sent us a sample of this compound for coating honey barrels, &c. He says he has used it in putting up about 5,000 lbs. of honey last season, with the best results, and considers it far superior to beeswax, and in every way equal to parafline for the purpose mentioned; while it costs 9 cts. per lb. less than either of the above. It being of an elastic nature, it will not crack or peel off, and it imparts no taste or smell to the honey.—He has not been able to discover any objectionable feature in it, and thinks it as wholesome as beeswax or paraffine. See his advertisement in the JOURNAL.

☞ Judge Andrews, of McKinney, Texas, sent us word about the middle of the month, to look out for a "red-hot epistle" from him on the "purity of the queens," &c., as noted on page 151 of the Journal for May; but so far it has not put in an appearance. Texas is just the place for a red-hot shot to emanate from, but we are far enough North to allow of a little "cooling" before it reaches us. "So mote it be."

☞ The Indiana State Fair takes place at Indianapolis, Sept. 30, 1878.—We have received a copy of the Catalogue, and notice in class 33, a premium of $5 for "the best display of honey;" $3 for "the best 5 pounds of honey in comb;" and $2 for "the best sample of cake, home made." Now let our friends in Indiana make sure of the latter premium for "Honey Cake." Take enough to feed the judges with it, and it will "take 'em," sure. For the comb-honey premium, some white clover honey in prize boxes, nicely glassed, will captivate the judges, if they depend upon "their senses" rather than "rewarding favorites."

☞ A correspondent, after weighing many different sized boxes, has figured out their relative contents, as follows: "A box when filled with newly made comb-honey, well sealed over, will contain 3 lbs. of honey to every 100 cubic inches of space contained in the box.—Thus a two-inch box, 5¼ inches wide, and 6¼ deep—the prize box—outside measure—will contain 66 cubic inches of space, and will consequently hold 2 lbs., box included. This rule holds good with any size of boxes—with the exception that the larger sizes of boxes will contain a trifle in excess of this estimate."

☞ Henry Alley, of Wenham, Mass., has just sent us some very fine Italian queens. They came by mail (letter postage), and were received in excellent order. They are of bright yellow, and appear to be in every way first-class.

"A LAND FLOWING WITH MILK AND HONEY."—The *Intelligencer*, of Belleville, Ontario, goes into ecstacies over the success of our friend, Mr. W. C. Wells, of Thurlow, Ontario. By quoting the text at the head of this article, he must really think that Canada is a modern paradise—

> "A land of promise this:
> Long looked for, by the good."

Well; we don't object, especially when the *Intelligencer* can report anything so good as the following:

"On Friday last he extracted the honey from a hive, and then put it on a platform scale. The hive gained in weight, on Saturday, 25½ lbs.; on Sunday, 30 lbs.; on Monday, 12½ lbs.; and on Tuesday, 5½ lbs. In all, in 4 days, 72½ lb. of honey extracted from one hive. This is actual gain by weight.—Mr. Wells has other colonies which did as well as this one, but this gain was by actual weight. The large quantity of cheese we ship is well known. We are entitled to say this is a 'land flowing with milk and honey.'"

☞ In a private letter, received just as we are going to press, Prof Cook remarks: "I wish you could see my class of 30, working with the bees.—They do it like veterans." Of course we would like to visit the College, and hope to, at some future day, but we are so busy now as to have but little time to devote to nourishment, recreation or sleep. For several months, passers-by have marked the office of the Journal, as they are returning from places of amusement "along towards the midnight hour," by the light on our desk burning so brightly.

We did not intend to say this—but that one class of "three" (not 30) also "work like veterans" at the Journal office apiary. They, like all other students, are enthusiastic on bees; their devotion never tires, never ceases. We invite the Professor to come and see our class. Being in a city, we always have quite a crowd to witness the manipulations with our bees. It is a new thing, here.

Bee-Keeping in Colorado.

Many inquiries have come to hand about bee-keeping in Colorado, and in order to answer them we quote the following from the Pueblo *Chieftain* concerning bee-raising in Colorado:

> Will bees thrive in Colorado? is a question that has been asked by a great many persons who were desirous of adding this cheap and wholesome luxury to their places. Nearly everybody will say that bees cannot live here—there are no flowers to speak of, no clover or anything else that produces honey, they say. Now these comments are wrong and not based on facts. There are several very successful apiaries in Fremont county, but as we are only acquainted with two persons owning apiaries, Messrs. Frazier and Tongs, we cannot say how profitable the others, probably a dozen in number, have heretofore been, but judging from the successful workings of these, the net yearly profits must be considerable.

It seems the editor visited both apiaries and remarks as follows:

> We found upon examining the hives that the lower apartments were full, and the upper ones two-thirds full, of as nice clear white honey as was ever gathered from white clover. We were somewhat astonished to see such an abundance of honey laid in at that time in the year, when the surrounding country for miles was perfectly void of vegetation, with the exception of buffalo grass and cactus, and as a matter of course, our next question was—where did the honey come from? and was informed by several bee raisers that the much abused cactus (both flat and bush) furnish a large quantity. It is beyond the shadow of a doubt that Colorado, especially the southern portion of the State, possesses some very decided advantages in regard to the winters over the northern and western States for bee-raising, and as honey keeps up (in Pueblo) to the old price of 25 cents per pound, we do not see why it does not pay.

☞ Notwithstanding we have so often referred to the matter—many (thoughtlessly, no doubt,) still write correspondence on the *face* of postal cards. This is not allowed by the P. O. Department—and every such offense against the Postal Laws costs us 5 cents. These amounts are small, but they aggregate several dollars to us each month. Will our friends please be careful not to do so hereafter.

☞ Preserving fruit with extracted honey instead of sugar, is superior in every way. It is not so apt to sour and require a second boiling. Pick the fruit, wash it and drain off the water; then place it in a large kettle or pan and add one-third as much honey as here is fruit, boiling it until the taste of the honey has evaporated.

☞ A correspondent recommends the following for separating honey from wax: "Put honey-comb and all into a tin pail upon a moderately warm stove, adding a tablespoonful of water to each pound of honey. Stir occasionally with a piece of wire until the contents of the pan are in a liquid condition. Do not allow boiling to begin.—Remove the pan from the fire and set it aside to cool. The cake of wax, to which all impurities will adhere, may then be carefully lifted off with a knife."

☞ Friend Doolittle's fancy crate of honey, to which was awarded the Gold Medal in New York, last fall, has been exhibited, as such, by Mr. W. M. Hoge, in London, Liverpool, and other cities of Great Britain, as well as the Paris Exposition.

☞ The large podded milk-weed almost invariably causes the death of every bee alighting upon it. The bee either adheres to the plant, or else bears away a small scale sticking to its feet, and cripples itself fatally in attempting to remove the annoyance.

FROG-EATING BEES.—Now "Froggy" stands at the bar on trial for various thefts and robberies. My friends, the bees have a serious charge to make against him. One evening in July last he steathily crept up a slanting board placed against a beehive, and with his trap-like jaws caught the bees leaving and entering the hive. Why the bees did not charge him at the point of the bayonet I do not know, except it was his slimy coat of mail, on which they could get no foothold. Anyhow, the pet "Froggy" is not as innocent as he looks.—*Land and Water.*

RATS AND MICE.—Several correspondents write to announce the complete extirpation of rats and mice from their cow-stalls and piggeries since the adoption of this simple plan: A mixture of two parts of well-bruised common squills and three parts of finely-chopped bacon is made into a stiff mass, with as much meal as may be required, and then made into small cakes and baked; these are put down for the rats to eat.—*English Standard.*

Foreign Notes,

GLEANED BY FRANK BENTON.

HERR DENNLER, of the *Bienen-Zuechter*, has observed that his bees prefer the blossoms of wild grape vines to those of the linden, and he recommends the former very highly for cultivation in shady, out-of-the way places, old walls, north side of buildings, etc.

◆

L'Apiculteur says of the apicultural show at the Exposition: "In visiting the pavilion containing the French apicultural products, we fear that more than one will say, when he learns what this or that cost the contributor and exhibitor: 'One should be able to produce a better article for that price; there should be a place more appropriate to the article, and to exhibit implements—otherwise than on tables—classed as far as possible in accordance with their order and use; they ought, as well, to be able to attach a different card in order to properly present some products.'"

◆

THE WAX TREE.—"The wax-tree grows upon the Andes in South America, reaches a height of 150 feet, and is consequently one of the finest trees of the tropics. Its trunk, which at the base reaches a diameter of about two feet, is covered its whole length with wax, which can be scaled off. The scales are then boiled in water and the wax floats, without melting; it only becomes softer and the impurities settle. From this mass, with which a quantity of soap is often mixed to make it brittle again, they make candles. The wax obtained in this manner is yellow, light, transparent, nearly like resin; it melts at a temperature somewhat stronger than that of boiling water. When rubbed it becomes very electric, and gives out a very strong smell in burning."

◆

CURE OF RHEUMATISM.—*Der Deutsche Bienenfreund* contains the following article by Herrn Schneider, Principle of a Royal Academy in Silesia: "Some six years ago my wife suffered from rheumatism in the right arm, no physician being able to help her. During a half year, in consequence of darting pains, the poor woman could not secure a night's sleep. The afflicted arm was nearly crippled; she could not attend to the household labors, and at last could no longer dress herself alone. I happened to recollect having read somewhere of the cure by means of bee-stings, of a farmer who was troubled severely with rheumatism. The pain which my wife must constantly endure could not be increased by a few bee stings, so I permitted the afflicted arm to be stung by three bees; and in order that the poison sacs might be completely emptied, I held the bees to the arm for some time. The result of this application was surprising. The first night my wife could, for the first time in six months, sleep well; the darting pain was gone. The next day the arm was swollen very thick, yet this rapidly decreased; the rheumatism had wholly left, and has not reappeared. I could mention a series of such cases in which the severest rheumatic pains have been successfully treated by the use of bee-stings, but it would only be a repetition, hence I will only add that the effect of the bee-stings always appears in the shortest space of time, and that this means has never been used without producing the most favorable results."

Notes and Queries.

Paoli, Ind., June 7, 1878.

"A neighbor of mine had a swarm of bees come out on Sunday, and on Tuesday, the second came. My second swarms never come under 8 days. I would like to know what made the 2 swarms come so close together. Bees have done well here in Southern Indiana, this spring; but the weather is so dry now that it is making clover honey short. My best wishes for the AMERICAN BEE JOURNAL."

B. M. LINGLE.

[Unfavorable weather may have delayed the first swarm from issuing till the oldest queen was ready to emerge from the cell.—In such a case she might, another queen being nearly ready to leave the cell, accompanying an after-swarm in two or three days.—ED.]

Delhi, Ill., June 1, 1878.

"Please give the name of the enclosed plant. It seems to be a species of clover."

H. D. EDWARDS.

[Prof. Beal, of the Michigan Agricultural College, answers as follows: "*Trifoluim reflexum*, (Buffalo clover). I should like a package of seeds."—A. J. COOK.]

Hart, Mich., June 5, 1878.

1. "The 3rd inst. I was engaged looking up a queen in a last year's after swarm—did not find her the first time going through the hive—was just going to renew my search when I had to leave them and look to a swarm which was just issuing. After taking care of them, I returned to my search for *the* queen. Went through the hive again to the middle frame, when I noticed on the lower front corner of it, a knot of bees which I was certain contained the queen. I took it up and released her on the middle of the frame, thinking perhaps she would be safe there, but they immediately imprisoned her. I went for a cage to put her in, but when I had released her again, she was a corpse. The colony is a medium sized one. How shall I account for their conduct?

2. I also have 2 hives, with about a pint of bees in each. One of them contains a queen 2 years old, the other is 1 year old.—I have been nursing them, thinking perhaps they would build up when honey began flowing more freely, but on looking at them to-day, I find none of the larvæ fully developed, and many of the cells contain 2 and 3

eggs. Are these probably drone laying queens?

3. Are drones admitted to other hives than their home?

Bees in this locality are doing nicely on white clover and raspberries. Swarms are issuing nearly every day."

E. S. HOUGHTALING.

[1. The bees, evidently, were dissatisfied with the queen, and were determined to supersede her.

2. The queens are disabled, or drone layers. You should either give them a prolific queen, a queen cell, or double them up with some other colony.

3. Drones, having no propensity for robbing, have no desire to enter other hives than their own.—ED.]

Council Grove, Kansas, June 3, 1878.

"In the hive recommended by Prof. Cook, in his *Manual*, there is no provision for ventilation, in case the entrance is entirely closed. How would it do to have a hole, 4 to 6 inches square, through the bottom board, the hole to be covered with wire screen and open at all times? Will not bees do better for such ventilation? Please answer through the JOURNAL."

D. P. NORTON.

[If the hives are shaded they need no ventilation more than spoken of in my book. When cool, they ought to have only one opening, and that small. As the weather gets hot, push the hive clear forward, so as to give entrance clear across. That is enough. Of course, they must be given plenty of room inside. I *would never have more than one entrance*. I have experimented much, and find more worse than useless. See new book on this subject.—A. J. COOK.]

Otley, Iowa, April 30, 1878.

"Father and I put 81 colonies of bees into the cellar, about Nov. 17. Took them out about March 13. Wintered without loss.—Seem to be in fine condition now, with the exception of 2 or 3. Apple and cherry bloom very good. Think prospects are good for an excellent honey harvest.—Everything about a month earlier than last year. I like the Bingham smoker very much. What is the best method of straining extracted honey?" W. C. NUTT.

[This question is answered so concisely in Prof. Cook's new work that we will insert it here. Before doing so, let us remark that every beginner, or person of limited experience in bee-keeping, would find it greatly to their advantage to get a copy of this work. They will there readily find, by the aid of copious indexes, any subject they may want information upon.—It will save them much perplexity, and often many times the price of the book, by having it at hand just the minute when the information is desired. In the "Manual of the Apiary," page 193, Prof. Cook remarks: "To render the honey free from small pieces of comb, or other impurities, it should either be passed through a cloth or wire sieve—I purposely refrain from the use of the word strainer, as we should neither use the word strained, nor allow it to be used, in connection with extracted honey—or else draw it off into a barrel, with a faucet or molasses gate near the lower end, and after all particles of solid matter have risen to the top, draw off the clear honey from the bottom. In case of very thick honey, this method is not so satisfactory as the first. I hardly need say that honey, when heated, is thinner, and will of course pass more readily through common toweling or wire-cloth."—ED.]

Indianapolis, Ind., May 22, 1878.

"My bees are doing finely. They wintered well. I have a bee house that I think good to winter as well as to summer in.—They are now working in boxes. Is there Comb Honey Racks to suit hives, 12x13 inches, with frames 12x12, and what will such cost? Alsike is just coming into bloom. I have about 2 acres. It looks well." W. A. SCHOFIELD.

[Yes, such is described and illustrated on the third page of the cover of this JOURNAL. It would contain two rows of boxes, 12 in all. A sample, all complete with outside boxes glassed, and tin separators, costs a dollar. By the quantity they would come cheaper than that.—ED.]

Putnam Co., Ill., June 14, 1878.

"DEAR EDITOR:—My bees made a little fortune last year. My 200 colonies produced 1,200 4 lb. boxes of honey. I sold 30 colonies, leaving 170 and 4 swarms, up to June 13. I do not expect many swarms this season. The hives were very full of bees and honey early in May. Since then they have done poorly; now there is a little white clover. The drone comb foundation that J. Roberts and myself got of you is of excellent quality. Bees are doing well with it. Please answer the following questions:

1. Why are drones sometimes produced in worker comb?

2. Two of my queens produced worker bees in March and April. In May they produced drones in worker comb; then I killed them.

3. Is there three sizes of comb foundation manufactured,—worker, drone, and for honey?

4. I would like a pure Cyprus queen, but do not know how they should look to be genuine. Can some one give a description?" OTTO HALBEIB.

[1. When there are no drone cells, queens will sometimes lay in worker-cells, and if compelled to do so, will, reluctantly, lay worker eggs in drone cells.

2. They were for some cause, no doubt, unable to produce workers any longer, and hence the drones in the worker comb.

3. Two sizes of cells only are produced—worker and drone. The latter is preferred for surplus, by some.

You will find such description on page 237 of this JOURNAL.—ED.]

Montgomery Co., Texas.

"I inclose a branch with flowers of the wild peach. It is an evergreen; grows abundantly on the margin of creeks and river bottoms. Bees crowd it heavily; I think it very valuable for bees.

"I also send you a specimen of a plant abundant here. It comes up in the fall and grows slowly through winter, not leaving the ground (like white clover,) covering the ground by the first of March; holds dew on the under side all day. In the sunshine the bees work on it all day. I have seen no blossoms yet. I never noticed it before this year. The winter having been very warm, many of my bees ate up their winter supply, and perished during January and February. My summer and fall pasturage is not good. The spring, till June 20th, is very fine. It closes with the linn. We have very many fine localities for bees in this State. Three-fourths of south-eastern Texas is woodland, and all creeks and small streams abound with bee pasturage. There are a great many wild bees in the timber and bee hunting is frequent in the fall. Some bring in 2 or 3 barrels of honey. THOS. D. LEONARD.

[Prof. Beal says that the tree with evergreen leaf is *Prunus Caroliniana* (cherry laurel). The leaves are said to poison cattle which eat them. The small herb he does not know; he would like to see some in flower.—ED.]

Boundary City, Ind., May 31, 1878.

"I raised 7 queens from the imported queen I got of you last fall. They are not as bright a yellow as the mother. I raised one from a home-bred queen that is of a brighter yellow than either of those from the imported mother. Those from the imported mother have two black spots on their backs by the yellow rings—the other one has not. Which are the purest, those with or without the black spots?"

D. K. KNOLL.

[Imported queens are procured, usually, to infuse new blood into the apiary, and not on account of their personal beauty. Their American progeny sometimes vary, being either lighter or darker perhaps oftener than of the same color as the mother.—Their progeny—the workers—forming the test of purity. Of these you do not speak.—The black divisions between the yellow bands (which we suppose you mean by the spots by the yellow rings) are sometimes more pronounced, but usually less distinct,—they have nothing to do with purity in queens.—ED.]

Eminence, Ky., June 17, 1878.

"Is it practicable to feed extracted honey to bees during the dry summer weather when there is little or no honey to be had from flowers and have the bees make section comb honey of it with profit, and how to do so? The theory looks plausible, but I would like to know if it has been demonstrated, and to what extent it will pay. It seems to me that it would stimulate brood-raising and keep stocks strong and ready to gather large stores from buckwheat and other fall pasturage. If the extracted honey can be changed to section comb honey it would be more salable.

2. I want some arrangement in the way of a comb-rack that can be worked two stories or one, as circumstances may require. On many of my hives the sections are nearly all full but the honey is not ripened sufficiently to seal over, and the bees want to swarm because of not having room. If I had racks that would suit to just slip one under the almost completed sections, full of empty ones, I think the bees would be happy, not swarm, and more clover honey would be secured. I intend to have some such another season. E. DRANE.

[1. Will those who have had experience in feeding honey to bees for the purpose of getting them to store it in surplus boxes please report the result of their experiments?

2. A Rack to admit of "tiering up," is described on page 240 of this JOURNAL.—ED.]

Noblesville, Ind., May 8, 1878.

The queen of one of my best colonies has raised one lot of brood but will not lay any more eggs, and the bees will not work; they have some honey. Why is it, and what is the remedy?

With a fair season how many stands ought I make from three good colonies and get 100 lbs. honey? L. M. WAINWRIGHT.

[Of course the queen is disabled and should be superseded. As the colony has no brood, the bees cannot raise a queen unless you give them a frame of brood or a queen-cell. If you have no surplus queens you should give them a queen-cell or brood at once. One swarm from each colony is sufficient if you want 100 lbs. of honey. So much depends upon the season that no one can give a definite rule.—ED.]

Benton Co., Miss., June 10, 1878.

"I am troubled by the moth-worm; how can I get rid of them?" L. Z. D.

[Strong Italian colonies are not troubled with moths. Keep your colonies strong, and they will never become mere nurseries for worms.—ED.]

Conventions.

North-Western Illinois Convention.

The North-Western Illinois Bee-keepers' Association met at Rock City, May 7, 1878, President H. W. Lee in the chair. The minutes of last meeting were read and approved, and 6 new names were added to the roll. A letter from the Secretary of the Western Illinois Bee-keepers' Society, asking us to change the name of our society, was read, and laid on the table without discussion. The Secretary handed in his resignation, which was accepted, and Jas. E. Fehr was elected his successor.

It was decided by a unanimous vote not to change the name of our Association.

DISCUSSIONS—UNITING COLONIES.

Mr. Hodgkins scented with peppermint.

Mr. Holly united in cool weather, by lifting frames and bees out of one hive, and putting them into the other hive ; and they were always accepted.

Mr. Fehr unites the same way ; prepares them in the middle of the day by taking half of the comb out of both hives, moving the combs in one hive to one side of the hive, and in the other hive to the middle ; then in the evening, lifts combs with bees in the latter and sets in the former. Sometimes takes one queen away and sometimes not, and the bees never quarreled.

Mr. Lee thought they might not kill the one queen and keep both. He had several cases of 2 queens in 1 hive.

Mr. Conklin has frequently united by putting one hive above the other, when putting them in the cellar, taking off the bottom board of the upper one.

WHY BEES DESERT THEIR HIVES IN SPRING.

Mr. Holly thinks it is for the want of pollen. He said there must be one universal cause, or why did they swarm out one spring, about 8 years ago, all over the country, as reported in the journals ? He had seen them so desert their hives in June, in very dry weather, when there was no honey or pollen. He had not seen any desert their hives when they had pollen.

Mr. Hodgkins thought it was dampness. Had seen a neighbor's bees swarm out, when, upon examining the hives, he found the combs and hive wet and damp.

Mr. Lee had seen them desert the hives with plenty of honey and pollen ; thought starvation would drive them out ; thinks the black bees desert their hives more than the Italians.

CAN COMBS BE USED SUCCESSFULLY AFTER BEING MOULDY ?

Mr. Holly had lost many bees in wintering, when he had box hives. Combs would be mouldy. He would cut out all mouldy comb.

WHICH IS MOST PROFITABLE, EXTRACTED OR COMB HONEY ?

Mr. Holly thought people were getting to know the pure from the adulterated honey. This will increase consumption.

Mr. Conklin had created a demand for extracted honey, by leaving samples at the grocery stores, and allowing every one to taste it.

WHAT TIME IS MOST APPROPRIATE TO PUT BEES INTO WINTER QUARTERS ?

Mr. Hodgkins put his into winter quarters 6 weeks before cold weather. He would make sure of housing them before cold weather. They always wintered well when put in early.

Mr. Lee would put them in during the first part of November, if he felt certain they would stand the long confinement.—He always gave them upper ventilation.

WHAT WERE THE RESULTS OF WINTERING DURING THE PAST SEASON ?

Mr. Williams lost more bees during the last winter than ever before. He wintered in the cellar. They got too warm and smothered; consequently, his bees are weak.

Mr. Lee lost 1 colony, out of 201 colonies.

Mr. Hull lost 1, out of 59.

Mr. Holly wintered 62, lost one.

Mr. Conklin had 39 and lost none.

Mr. Hodgkins wintered 40 colonies and 4 nuclei, and lost none.

Mr. Stewart wintered 83 without loss.

Mr. Adams had 11, and lost none.

Mr. Keister lost 9, out of 73.

Mr. Fehr had 45, and lost none. Some were very weak, and he united them, leaving but 39.

R. M. Milliken, Mr. Stewart and Mr. Keister were appointed a committee to revise the Constitution.

RESOLUTIONS.

The following motions were carried unanimously :

Resolved, That we appreciate and recommend the invention of H. W. Conklin, for fastening comb foundation into brood frames, by 2 saw kerfs ; one horizontal, the other diagonal, same as described in the AMERICAN BEE JOURNAL for May, page 142.

Resolved, That we extend our warmest thanks to Mr. and Mrs. Jonathan Stewart for their courtesy and hospitality so generously tendered to us.

Resolved, That our next annual meeting be held at Shirland, on the 3d Tuesday in December, 1878.

Resolved. That we adjourn to meet on the 1st Tuesday in September, at the residence of R. M. Milliken, Dakota, Stephenson Co., Ill.

JAS. E. FEHR, *Sec'y.*

Los Angeles (Cal.) Convention.

A meeting of the bee-keepers of Los Angeles County was held on May 18, 1878.—A. J. Davidson in the chair. The minutes of last meeting were read and approved.

The Committee on Packages presented a report, and exhibited sample barrels, made at Anaheim, 15 and 20 gallons (holding from 200 to 250 ℔s.), substantially made with iron hoops, and the ends of the barrels painted, costing respectfully $1.50 and $1.75 ; cans, square with screw top, 10 ℔s. per 100, $16 ; 5 ℔s. per 100, $13 and $12.50 ; round, 10 lbs. per 100, $13 ; round, 5 ℔s. per 100, $10 ; round, 2 ℔s. per 100, $6. The latter cans are without screw top, and are soldered. The additional cost of waxing the barrels will be from 20 to 25 cts.

After much discussion pro and con, Wm. Muth Rasmussen offered the following, which was adopted :

Resolved, That the bee-keepers be requested to adopt the barrels this season.

J. E. Pleasants stated that the bee-keepers of the Anaheim district had adopted them this season, and that freights were less on honey in barrels than in cans.

A. J. Davidson stated that he had taken 5,000 lbs. of honey. It was also stated that the firm of Lincoln & Kimble, and others, had taken much more.

Wm. Muth Rasmussen said he had tried the experiment of breaking the caps of the honey cells in the brood chamber, to cause the bees to build comb more rapidly in the upper chamber, and found it worked well, and that the bees would carry the honey above.

E. W. Sinclair exhibited a specimen of honey, made from boll-sage, which was of most exquisite flavor, and so transparent that the honey was of little or no obstruction in reading a paper through the bottle.

Mr. Chapman spoke in the most commendable terms of comb foundation. He had used $15 worth this season, and wanted as much more.

As the working season is now upon us, another meeting will not likely be held until late in the season. The subject of a display at the coming Horticultural Society was taken up and discussed. Some objections were made in consequence of the Society having packed the premiums at the last fair, that too many drones in the hive consumed the honey. It was agreed that a fair deal on the part of the Horticultural Society, at the next fair, would insure a good display in the agricultural department. No decisive action was taken, and, on motion, the meeting adjourned, to meet on the third Saturday in August, to convene in the hall over the Grange Store, at 1 p. m.

N. Levering, *Sec'y*.

Ventilation.

Read before the N.E. Bee-keepers' Association at Rome, N. Y., Feb. 1876, *and published by request of the Society.*

Industry, skill, and economy, will secure a competence in almost any legitimate pursuit. Without these three essentials, business becomes a mere lottery, with many more blanks than prizes; and although the prize of success may occasionally be obtained, it adds nothing to the credit of the obtainer.

Formerly, bee-keeping was supposed to be a highly favored pursuit, success depending not upon the amount of labor and skill employed, but upon the possession of a mysterious something, called *luck*.—Happily, wiser counsels have prevailed until, at the present time, our leading apiarists are united in the assertion "That the greatest enemy of the bee is the ignorance of man." Nowhere do we see the truth of this statement more conspicuously shown than in that much discussed branch of our business, wintering; and were we, to-day, to examine in detail the many theories advanced, and the equally numerous practices founded upon them, we should be compelled to accept the conclusion that luck more often than wit is still to have the credit of success.

As a discussion of the whole subject of wintering would require too much time and space, I will confine my thoughts principally to ventilation while in winter quarters; (a subject upon which no two authorities agree), and in order to be consistent, I shall have to disagree, to a very large extent, with the many that have preceded me. At the outset, we shall have to satisfy all that bees require the accession of fresh air to maintain life and health, a proposition that common sense would answer by an emphatic *yes*, but to which many bee-keepers give as equally an emphatic *no*, and bring forward many illustrations to prove the truthfulness of their theory.

Gen. Adair, in an elaborate paper on ventilation, mentions having had a honey box, the air-space of which was half filled with living bees. After proving, to his own satisfaction that it was air-tight, by blowing into it, as a cooper does into a barrel, he covered the entrance with waxed paper and set it away for a couple of days. He then examined it and found that the bees did not seem in the least inconvenienced by their confinement.

Prof. Cook, of the Michigan Agricultural College, reports that one of his most prosperous colonies, in the spring, was one that had the entrance to the hive completely filled with ice for nearly the entire winter. But more important than either of these experiments is the well known fact that bees have been buried for months under ground, with no provision for ventilation, and with the surface of the ground frozen solid during the whole time. Are any more facts needed to prove that ventilation is unnecessary? We might subscribe to this, did we not know that bees require food at all times, and that from 1 to 3 ℔s. of honey per month is consumed by each colony, while in winter quarters. Chemistry tells us that the consumption of this amount of food requires the introduction of a larger amount of atmospheric air. It also tells us that the combustion of 3 ℔s. of honey, within the body of the bee, produces 2¼ lbs. of watery vapor, and nearly 24 cubic ft, of carbonic acid gas. The free atmosphere contains but 3 or 4 parts of carbonic acid in ten thousand, and the best European authorities are united in asserting that for the respiration of man, it should never contain more than ten parts in ten thousand. Marker and Schultze, of Germany, in their researches on the natural ventilation of stables, have found that for domestic animals the proportion may safely run three times as high, or 30 parts in 10,000.

On the supposition that bees need an atmosphere no more pure than this, we find the consumption of 3 lbs. of honey requires the passage through the hive of not less than 8,000 cubic ft. of air. As the brood department of our hives usually contains less than a cubic foot of free air; this necessitates the complete removal of this air, at least, 8,000 times.

These figures, undoubtedly, seem large, but if I should say that 200 colonies of bees require as much air as their owner, you would not be surprised, but think the estimate quite small. Now, Gen. Morin, of Paris, (see Smithsonian Reports,) has furnished us the best of proof, (experimental, not theoretical), that in close apartments, in order to keep the atmosphere around him sufficiently pure, man requires over 2,100 cubic feet of air per hour, a result subscribed to by the best authorities in Europe. This is largely in excess of the amount required by 200 colonies of bees, supposing each to consume 1½ lbs. of honey per month.

But where did the bees in close confinement get their supply of air? There is no proof given that the receptacles were air-tight. Adair's test only proves that the outlet was immeasureably smaller than the inlet; and it is not claimed that Prof. Cook's hive had no crevices through which a limited supply of air might not enter. I have had the entrances of several hives closed for weeks at a time, without serious inconvenience to the inmates, but I know the connections were not air tight. Even if they had been, the bees would have received a considerable quantity of air through the walls of the hive.

It is a well established fact that atmospheric air freely penetrates the tissues of all plants. Corewinder found that a single colza plant, in 12 hours, decomposed 2 qts. of carbolic acid gas. Bousingault found that 12 square feet of oleander leaves decomposed about the same quantity.—These results prove that a very large quantity of air must have coursed through the plant. Some idea of the size of the "breathing pores," or *stomata* may be formed, when it is known that 100,000 of these openings may be counted upon an average sized apple leaf. Although the leaves are much more pervious than the stems, air in various degrees of purity may be found in all parts of the plant. If green wood allows the free passage of air, certainly dry wood will be more pervious. We all know how freely wood imbibes water, and it is safe to say that air will go wherever water can, for it is 770 times lighter. On the supposition that one-half as much air passes through an unpainted inch board as through a limestone wall, well laid in morter, (not an extravagant supposition, I think you will say), I find by computation, that with the size of hive we use, so long as the hive walls remain dry, quite a large per centage of the air required by the bees in winter will enter this way. In proportion as the wood hive becomes saturated with water is the passage of air impeded, a fact of much importance in wintering.

How about the bees buried? Facts are on record, showing that men have been buried for days at a time and were not suffocated. Certainly, when men can live, bees ought to, as they require so much less air. But the men were not buried under frozen ground, you say. Von Rettenkoffer, than whom there is no better authority living, says that he believes frozen soil to be not much less impervious to air than the same soil unfrozen. I have not space to give his reasons, and will only say that he seems to have the best of the argument. He says, in regard to the free passage of air through the ground, "I know cases where persons were poisoned and killed by gas, which had to travel 20 feet under the street, and then through the foundations, cellar, vaults and flooring of the ground floor rooms."

In wintering bees underground, we need not have so much fear that the quantity of air will fall short, as that it will be deficient in quality. A year ago, in reading Prof. Johnson's admirable treatise on "How Crops Feed," I learned of the impurity of the soil air. It usually contains all the moisture it will hold, and from 10 to 390 times as much carbolic acid gas as the free atmosphere. In sandy soil the air is the purest.

To keep the soil air out of our bee cellars, last fall, we carefully coated the sides and bottom with hydraulic cement, and I find that it makes them much dryer and better.

The material of which your bee house is built will influence the amount of artificial ventilation needed. In order to give you an idea of the extent of natural ventilation through the walls of buildings, I cannot do better than again quote Rettenkoffer:—

"For every square yard of wall surface, at 9⅛° fahr. difference of temperature, the spontaneous ventilation, or passage of air through the wall, amounts per hour to

4.7 cubit feet,	with	walls	of	sandstone,
6.5	"	"	"	quarried limestone,
7.9	"	"	"	brick,
14.4	"	"	"	mud."

We prefer to build our wintering houses of earth. You would at first conclude that sandstone walls would be more porous than limestone, but sandstone is a smoother stone and does not require so much mortar. It is the mortar that admits the larger part of the air. There has always been a serious disagreement between theoretical and practical ventilation, until a consideration of the extent of natural ventilation reconciled the difference. Many interesting experiments are on record. With suitable apparatus, candles are extinguished by air blown from the mouth through solid brick walls, a foot in thickness.

Another mistake still current in some of our text books on ventilation is the statement that impure air, being heavier than pure, falls to the bottom of a room and remains there, unless provision is made for its outlet at that point. These authors are ignorant of the law of the diffusion of gases. Gases intermingle perfectly, no matter what the variation in density. Usually there is not much difference in the purity of the atmosphere in the various parts of a room, unless the changes are quite rapid.

A consideration of the moisture of the air, as well as of the practical appliances for ventilation must be deferred for the present.

S. H. Elwood.

Starkville, N. Y., Feb. 1, 1876.

Mr. Editor:—The publication of this essay has been postponed with the expectation of reviewing and correcting it.—Further changes will be made in our ventilating apparatus, and I prefer to test thoroughly before recommending. S. H. E.

June 1, 1878.

Lancaster Co. (Pa.) Association.

The Association met on May 13, at Lancaster. The following members being present: Peter S. Reist, Litiz, President; John Huber, Treasurer, Pepuea; Daniel Krider, West Lampeter; I. G. Martin, Earl; Ellis Hershey, Paradise; J. F. Hershey, Mount Joy; J. B. Eshleman, Ephrata; J. G. Rush, Pequea; John H. Mellinger, Strasburg; E. H. Mellinger, Strasburg.

On motion, F. R. Diffenderffer was elected temporary Secretary.

REPORTS.

Mr. E. Hershey said, last fall he disposed of all his bees but 15 colonies, which came through the winter all right. Had no swarms so far.

Mr. Rush reported that out of 7 colonies he had lost 1; 1 colony has swarmed twice, and both are doing well. The prospects for a honey crop are good.

Mr. Mellinger reported that all his colonies came through the winter very well; has had 5 new swarms. One colony has sent out 3 swarms, and another will send out 2.

Mr. Martin reported that he had wintered 16 colonies; he packed the hives in chaff, and they came through well. He had no swarms yet.

E. Hershey went into winter quarters with 62 colonies. He built a bee house, and brought all his colonies through. So far, 9 have swarmed. Some of his neighbors have new colonies. The season has, up to this time, been unfavorable to the production of honey.

Mr. Eshleman read a letter from W. J. Davis, of Warren county, who was expected to be present. He had wintered 153 colonies and lost 9. The letter further stated that the bees were hard at work, and the prospects for a large honey crop were very good. The speaker stated, in reference to his own bees, that he had wintered 22 colonies, and all had come out. There was no trouble in keeping bees the past winter as it was so mild.

Mr. J. F. Hershey stated that W. B. Detweiler, a neighbor of his, had put up 72 colonies last fall, and lost none. Mr. Myers' bees also came out well, but none have swarmed.

President Reist said that he started with 4 colonies, which gradually increased to 50 or 60. These he disposed of by selling or by placing them with neighbors. Of those put out in shares, all the colonies are doing well. One colony swarmed 3 times. He wintered on summer stands. Bees, everywhere, are going well, and gathering honey rapidly. He uses the Langstroth hive.

QUESTIONS DISCUSSED.

Mr. Hershey asked in what condition a colony should be to be divided, and at what time it should be done. On this question he gave his own views. He thought the hive ought to be strong in bees and honey. If the colony is divided in the honey season, the old colony does not get strong enough to gather a stock of honey large enough to enable them to pass the winter; but if you wait until the hives are full, they can be divided safely. About 3 weeks from the present time they should be divided. The young swarm should have 3 weeks to gather its winter stock of honey. He preferred artificial to natural swarming. Has lost a colony which he did not attribute to artificial swarming but to cold weather. After the 15th of June it is unsafe to divide a colony; however, this season, the limit should be placed about 2 weeks before that time, as the season is so forward.

Mr. Rush would rather depend on a natural swarm than upon Mr. Hershy's plan; he saw no advantage in that method.

Mr. Martin used a good deal of artificial comb foundation, and liked it very much.—He has found as many bees to hatch out of them as when they are not used. although it is stated that the product is much less.

Mr. Eshleman's question was, "will a natural swarn accept immediately a strange queen without caging?"

Mr. Hershey said if an artificial swarm was divided it would not accept a strange queen; what a natural swarm would do he did not know.

Mr. Martin had no experience in the matter, but had read that the strange queen would be accepted.

Mr. Eshleman said his reason for putting the question was to ascertain whether a colony could in that way be Italianized.

"Will it pay to feed between apple bloom and white clover blossoms?" was asked by J. F. Hershey.

Mr. Martin thought that if they were fed until clover comes in bloom, they could then go to work in earnest.

Mr. Hershey was of the same opinion.—But if the colony had an abundance of old honey he would let them consume that; then there is no advantage in feeding them. He fed them through a tin trough, about 1 inch wide, which is filled through a tube from the outside. The best thing to feed to them is honey; the next best, sugar and water, in equal proportion. Best brown sugar should be used. Honey stimulated the bees to breed more than sugar did.

President Reist asked whether moths can get into hives without their laying eggs there.

J. F. Hershey said that moths do not lay eggs in the hives. They lay them on the outside, and the bees carry them in themselves. Moths will go into a weak colony, but not into a strong one.

Mr. Reist said he had heard that moths would not go into strong hives; but it was not true. They would go into any hive.

Mr. Eshleman had discovered that the moth would, if it could, deposit its eggs under the honey board, and the worm would then work its way into the hive.

Mr. Mulligan said you could not keep worms out of the comb. He had placed some in an exposed place on one of the coldest days in winter, but worms come out nevertheless.

J. F. Hershey proposed the question, "How soon should the second swarm appear after the first?" and it was briefly discussed. He thought it should be 9 days after, as did other members, but Mr. Mulligan said that under certain conditions it could appear 7 days after.

Mr. Diffenderffer, when the question of the time of next meeting arose, said he hoped that it would be just in the fruit season, so that they could discuss the question, "Do bees destroy fruit?"

Mr. Eshleman said he did not believe a bee could cut the skin of a grape, though they might cut through paper. Grape skin is almost as tough as leather.

Mr. Rush asked if any one could propose a plan by which it could be tested; and it was proposed to put molasses on a bunch of grapes and cut the skin of one grape. If the bee sucks the inside of the cut grape out, and does not touch the others, it is a reasonably sure sign that they cannot pierce the skin.

Mr. Eshleman said he would put a bunch of grapes at the opening of a hive, and then the bees could not get out without cutting the skin of the grape. If this did not test the matter, he did not know what would.

The Society then adjourned to meet the 2nd Monday in August.

J. F. HERSHEY, *Vice President.*

Chips from Sweet Home.

Read before the Western Ill. and Eastern Iowa Convention.

MARKETING HONEY.

Our worthy Secretary has given me this question to write upon and read to you. I presume it was his object to have me tell what *little* I know of how to market honey; and that is much less now than 2 years ago, and I knew less then than I did 5 years previous. In marketing honey, we wish to realize the most out of our summer's labor with the least expense, or in other words, How shall we put up our honey to make the most *net* profits, and to whom shall we sell it?

How we should put up our honey would depend entirely upon whom we sold it to.—The bee-keeper who has but a few hives and a home market for all he can produce will need to satisfy that demand with the least expense. If that demand be from neighbor farmers, mechanics, or druggists who buy it as an article of diet or medicine, empty it out of the indigestible comb, and sell them the cheapest honey in the best shape for consumption, and to you the most profit. Among this class there will be those who prefer honey in the comb, perhaps for looks, or fearing you may adulterate it. For those, you will need the 6 lb. box with one glass; this contains about the amount they wish at a time, and is in a neat, convenient shape to carry.

If your market should extend to the village or smaller towns, then satisfy the demand there for the least expense. Some will want the extracted honey; others, perhaps the majority, will want honey in the comb in packages, with no glass and as little wood as possible. To satisfy this demand, I know of nothing better than the Prize or Doolittle section, which holds nearly 2 pounds, being as large an amount as the consumer wants to buy, and as small as the retailer wishes to handle or that will pay you to put up.

Have your boxes or sections neatly made, and, above all, new and clean. By using guides, either comb or foundation, you can have your combs separate and straight, which not only adds system and neatness, but the consumer is able to cut them out of the frame or box in a nice cake instead of irregular, leaky pieces.

Of your extracted honey, *never* sell an article poor in flavor, or that which is dirty, or has soured on your hands, for you will lose more customers by so doing than you will make dollars. Better keep it to feed the bees.

In buying the different articles you need, trade as much honey as you can. Supply your blacksmith, shoemaker, or others you deal with, for in so doing you are marketing your honey and saving the cash (if you are fortunate enough to have any.

If your market should be in the larger towns or cities, then you will need to fill the demand there created. That demand is fast dividing into two classes, viz: those who buy honey to eat as an article of diet or medicine, and those who buy as an article of taste and luxury to adorn the table. Those who buy honey for the good there is in it do not wish to buy any expensive vessels that when the honey is gone will be useless, but will furnish their own, as they have always done when buying molasses or syrups. Now we come to the class most difficult to please. They buy honey to have something extra and nice; they are able and will pay a good price for that which pleases the eye and palate, none other being wanted at any price; they have their groceries delivered at their door, consisting of a variety of packages, done up in all shapes and sizes; among the rest, a cake of comb honey is to be delivered, free from leakage or dirt, not a cell broken, but just as nice as when taken from the hive. The retailer or groceryman is also a fancy man, dealing in fancy articles for fancy people; his time is precious, his goods the finest and best the market affords, some of which are called for if not seen; but honey must be exposed to view in the window, on the counter, or piled up at the door. He has no time to divide Harbison sections, cut combs out of boxes, neither will he have any leaky packages to daub his customers and his goods, to call in flies or fine-haired men who delight to stick a finger, knife or pencil in that tempting, beautiful comb just to taste it. To fill this demand taxes our ingenuity, and many, very many, are the ways tried to fill and cater to this class of customers, as may be seen by visiting the groceries of our large cities. To meet this demand with the least expense and the most proffit, I know of nothing better than the Prize crate and box, each comb to be built so as to be glassed or not as the trade may determine.

In selling honey in our vicinity, I find it necessary to have a *price* and not vary from it. In order to have a fixed price, we must know as to the demand, the amount on the market, quality and grade, and last, but not least, we must have a wholesale price as well as a retail one, so that we shall not undersell those who buy of us for retailing. Our labor and time to sell is worth as much as that of our groceryman, which I usually make at 5 cents a pound, *i. e.*, I charge 5 cents per pound more when selling a few pounds only than I would on a sale of 100 pounds. If selling by the 1000 pounds, I should make the price still less.

We must make a difference in the prices of extracted and comb honey. We can sell the extracted honey at a low price which will be within the reach of all who wish to *eat* it as regular as butter. We can afford it at a low price, but the comb honey we cannot; and we do not need to, for it is not bought as an article of diet but as a luxury —to have something a little extra—and, brother bee-keepers, we must get this comb honey in such shape as will appear extra nice for an extra price.

To create a home market among our neighbors, relations and friends, among those who frequently eat at our table, or call in while we are *eating to live* (not living to eat), we should always have honey on our tables in such dishes as are suitable for the show and convenience of handling. A large syrup stand for liquid honey in summer is convenient and neat. An open dish for candied honey in winter, and if we wish to ornament our table with comb honey, then put a nice cake in a fruit glass with lid. Make it appear, as is really the case, that we have plenty of honey and can afford to eat all we want and at all times, thereby setting a silent example to induce others to do likewise. Eleven years ago I took dinner with a bee-keeper, who had honey on the table in such a dish, and the conversation was such as to show me that it was not expensive as a regular article of diet. How opposite are the silent teachings of a small glass with a teaspoon! If he cannot afford to have plenty, I cannot.

Friends, if I have not written in the usual way for such articles, just remember that they are only a few dry Chips from Sweet Home. D. D. Palmer.

Eliza, Mercer Co., Ill.

Central Kentucky Convention.

The semi-annual meeting of the Blue Grass Bee-keepers' Association took place on Tuesday, May 7, 1878.

The meeting was all that could be desired, except for the unavoidable absence of two of its most prominent members, who were expected to deliver addresses, namely: Dr. S. E. Mitchell, of Bourbon Co., and John W. Bean, of Clark county.

President Patterson called the Convention to order. On motion, the rules were dispensed with, and opportunity allowed those who were not already members to become so, when 7 gentlemen enrolled.—After the reading of the minutes of the last meeting, President Patterson delivered the following able and instructive address, on

THE ORIGIN AND VALUE OF CO-OPERATIVE EFFORT:

Following the example of others in the United States, the bee-keepers of Northern and Central Kentucky felt that the interests of bee culture and the economical and commercial results which may be legitimately expected therefrom demanded an organization, which should unite the efforts and bring together the intelligence of those who apply themselves to this pursuit—such an organization, moreover, as would co-ordinate the experiences and subject to practical tests the various views, which from time to time obtain currency among those who, for pleasure or profit, study the habits of the industrious little workers.

In response to the invitation and suggestion of the Secretary, I propose very briefly to say a few words on the benefits of co-operative effort, and the grounds on which it rests.

Co-operative activity is a special phase of modern culture and enterprise. But it is by no means of recent or factitious growth. It began with the dawn of human existence, and found its earliest form of expression in human society. The family, the tribe, the municipality and the state are all various forms under which it manifested, and still manifests its existence. Isolation is incompatible with human instincts as well as with human interests. We can not conceive of an existence for the race in which, literally speaking, every man's hand is against that of every other. In the infancy of mankind the conditions and necessities of existence brought them together for mutual defense, and for the attainment of a common subsistence. In subduing nature, man would have been powerless without the co-operation of his fellows. When the first means of defense were provided for, when by common effort immunity was secured against attacks of the savage beast, when shelter from wind, storm, frost and snow were obtained, and the means of temporary subsistence acquired, the foundations of civil society were laid. The spontaneous impulse of a common sympathy, quickened by the apprehension of a common danger, brought men together and actuated them to united effort.

Out of common effort grew common rights and common obligations, which, recognized by a common moral sense, were antecedent to all legislation, and were the roots from which legislation sprang. Thus the sympathies, interests and instincts of men, shaped almost unconsciously for them the beginning of society, and established the unwritten law upon which rested the foundations of civil government. From these germs grew the mighty fabrics of ancient nationality. Upon this foundation was built the colossal structures which aspired to universal sovereignty, and which, in the splendid succession of ancient monarchies, beginning on the banks of the Tigris and ending on the shores of the Bosphorus, went far to realize the possibility of world-wide dominion. But the idea of co-operation and organization found expression in other forms, and in other relations than in civil government. Its beneficent results were not confined to the family, the city, the canton and the State.—When men looked into their own consciences they discovered thoughts and feelings, hopes and fears, rights and obligations not bounded by the narrow limits of material organization around them. While men in general were drawn together by a common sense of dependence upon something beyond and above nature, some in particular were attracted to common effort by the attempt to formulate and interpret the intellectual activities and moral impulses interwoven with their being—activities and impulses shared with the many, but whose import and significance the many failed to appreciate. Hence the variety of culture and ceremonial, which sometimes united people, and sometimes placed them in antagonism, and hence the philosophic schools and theosophic mysteries of various kinds, with reference to which all ancient literature abounds.—These, impressing a common thought and kindling a common desire, fostered the growth of human intelligence, deepened and quickened the moral sense, and elevated mankind to conceptions more or less adequate to their origin and destiny.

During the middle ages, when commerce began to be a great factor in human progress, and the burgher class attained an importance in the state unknown to antiquity, commercial unions were formed, and tradesmen allied themselves together for mutual protection. These leagues and guilds contributed not a little to the growth of civil liberty, by the concessions which they extorted from time to time from the central power. Protected at first by the central power, and supported as a counterpoise to the arrogance of a turbulent feudal nobility, they in the end consumed the vitals of the despotic power by whom they were encouraged, and by whose sufferance and countenance they had existed. During these times of dissolution and reconstruction, of meek submissiveness and high-handed violence, when nations and races were unconsciously working out their destinies, the co-operative activity of the guild, of the league, and of the cloister—agencies diverse, having little in common, and often antagonistic, each on its own line of action, and productive of diverse results, but afterwards co-ordinate to a common end—played no unimportant part in the transition from the civilization of antiquity to that of the modern era.

But it is not to ancient or mediæval times that we must look for the fullest development of co-operative activity. The revival of letters gave, by the diffusion of knowledge, a vast impulse to united action.—Many who, under the conditions heretofore existing, knew little and cared less about how the world was governed or what the thoughts of men were, found a new light dawning upon them. The enfranchisement of the minds and bodies of men raised all humanity to a higher plane. The spread of intelligence quickened all the dormant energies of mankind, and an era of mental and material progress was entered upon, such as the world had never known. Associations were formed for the promotion of scientific discovery. The value of united effort was felt and recognized in departments of human activity theretofore unknown.

As early as 1272, the Academy of Belles Lettres was established at Florence, followed at Naples by the Academy of Mathematics in 1540, and by that of sciences in 1560. Possibly a few years earlier than the establishment of the Academy of Belles Lettres at Florence, was the founding of the Sarbonne at Paris, followed by the schools of painting in 1391, of music in 1543, and of the fine arts in 1648. The impulse given to the cultivation of art, literature and science, by these and kindred associations, was immense. The works of the greatest geniuses of the day were brought together, their merits acknowledged and their faults noted ; canons of criticism were established and perfected ; the friction of mind upon mind quickened invention, encouraged discovery and perfected art ; publicity and reputation were for the most part no longer delayed, and fame, if not wealth, was the reward of industry and talent. The noble, the wealthy and the high-born vied with each other in the patronage of genius and the encouragement of art.

But not till the founding of the Royal Society in 1660, and the Academies of Inscriptions and Sciences by Colbert, a few years later, did co-operative activity make manifest what grand results it could accomplish. Boyle and Brouncker, Wallis and Ashmole, Sir Christopher Wren and Dr. Oldenberg have made their names forever famous by their efforts to realize the conception ot a learned society sketched by the author of the "New Atlantis." To this society Newton gave, in 1686, the first book of his immortal "Principa." In 1699, a model of Savery's condensing steam engine was presented. In 1761, the Royal Society sent Halley to St. Helena to observe the transit of Venus, perhaps the greatest event in its consequences to astronomy since the discovery of gravitation by Newton. In 1707, the medal of the Royal Society was founded by Copley, given in after years to famous men, as a recognition and reward of scientific discovery. Gray, the father of electric science, was the first to whom the gold medal was given. Since then, it has been awarded, among other illustrious names, to Franklin, Bradley, Rumford, Hunter, Faraday, Herschel and Davy.

The Royal Society, in its aims and results, may be taken as the type of voluntary association for the promotion of scientific discovery.

The Institute of France, embracing the five famous sections, each consisting of 40 members, has achieved no less renown.—Many of the greatest discoveries made by the greatest of Frenchmen owe their origin and their promulgation to the stimulus and aid given by this illustrious body ; and, to-day, no distinction is more coveted than membership in the "Institute de France."

Encouraged by the example of the Royal Society, associations were formed, not only in the metropolis, but throughout all the large and many of the second rate cities of Great Britain, for the cultivation and advancement of special departments of science. Of these, time allows me to mention only a few. Whole pages, nay, pamphlets might be filled with their mere names. Take for example, the Linnæan Society, for the cultivation of natural science in general ; the Geological Society, Geographical Society, Chemical Society, Archæological Society, Anthropological Society, Society of Antiquaries, Ray Society, and the Statistical Society. Under the auspices of these and kindred bodies, and through their aid and encouragement, the boundaries of knowledge have been pushed forward, and depths have been touched and heights reached, of which our fathers never dreamed. The British Association for the advancement of Science makes annual appropriations to facilitate discovery and test results in almost every branch of physical science.—Similar associations have sprung up in the United States, and are doing excellent service. In all the great cities of the Union, historical, philosophical, scientific and fine art associations bring together their respective votaries, and by concentration of forces and division of labor secure results impossible under individual effort.

Another phase of co-operative effort, peculiar to modern times, is found in trades and trades unions. These, when perverted, as they often have been, are productive of disastrous consequences to labor and to capital; but when confined to a legitimate activity, are productive of great and permanent good. Almost every activity, in which human brain and human muscle manifest themselves in material production, have associations formed for mutual benefit and mutual protection. Sometimes their operations are confined to sick benefits, aiding members in distress, caring for their families when deprived of their natural protectors, providing employment for the young, and placing them beyond the reach of poverty, furnishing them with an education and employment, helping them, in short, to help themselves, by fitting them to become honest, capable and industrious members of society.

Sometimes, by adding capital to labor, they become corporate bodies for production; reaping, thereby, not only the fruits of individual labor, but sharing in the production as well. In England, this kind of co-operative activity has sometimes taken a wide range. Under the auspices, and through the capital of such an association, stores are carried on, supplying all that families require; flouring mills are in operation to furnish breadstuffs; cotton and woolen mills have been set agoing, on a scale second only to those of Manchester and Bradford. In these enterprises there was employed last year, under the control of a single association, capital equal to $2,300,000. And why should not such enterprises be extended? There is an abundance of capital from the savings of the working classes, if properly employed, to extend such operations as these, and to yield large results in annual dividends.—One-half the amount deposited by the working classes in the savings banks of Great Britain, if employed in joint-stock enterprises, in manufactures, and in commerce, would add immensely to the yearly earnings of the working classes and largely to the national wealth. Of the $350,000,000 on deposit in the savings banks, $175,000,000 might be thus employed, yielding to the depositors annual average profits, amounting to over $17,000,000.

What has been done in Great Britain might be done in the United States. Our population is larger, our artizans better paid, and the aggregate amount of savings thus employed could in a short time fairly double the amount given above. There is little doubt that this phase of co-operation will continue to attract more and more attention in this country and in Europe, and that in the future it will form no unimportant factor in the adjustment of the claims of capital and labor.

Still another phase of co-operation, and bearing more directly upon the object for which we are now convened, is found in associations whose immediate object is not production, but the best means to facilitate production. Such associations exist all over our own country, and in many foreign countries. Notable among these are agricultural, horticultural, pomological, wool-growing, cattle-breeding, and bee-keeping associations. Here the end sought is to determine the principles which render successful production possible, leaving their applications to individual agency.—Here the end is, by observation and experiment, to generalize such a body of knowledge as shall enable those who devote themselves to these pursuits to realize the greatest possible expenditure of labor and capital. If hundreds of intelligent workers be engaged in the same pursuit, each collects facts and places himself, with special relation to the objects with which his activity is conversant, to the body of facts collected by each, and in the relation sustained to the end in view, there will be two elements, a general and a special; the general being common to all observers, and the special peculiar to the one. The special will sometimes be the result of fortunate or unfortunate accident, sometimes of the idiosyncracy of the individual. Through the former, the more obtrusive elements which enter into the body of knowledge will be rapidly generalized; through the latter, the less obtrusive—but not, on that account, the least important elements.—Moreover, these latter will continually tend to multiply, as the powers of observation are cultivated and strengthened. By the co-operation of the two, all the elements will be gathered, conjecture will rise to hypothesis, hypothesis to theory, and theory in the end will rise to the dignity of science, resting on a broad basis of observed facts and tested by experiment. Now, this is what workers, associated together for a common purpose, accomplish with the least expenditure of mental and physical force.—The observations, tests, and experiments of hundreds of workers and thinkers are brought together into a common stock, discussed, criticised, questioned, put in every light, in every shade, viewed from this standpoint, then from that, and the inferences which the seemingly established facts warrant, if not conclusive, are provisionally accepted till further light is thrown upon them. Then the whole array of workers, leaving the well enough established to take care of itself, apply themselves energetically to collect further facts, in order to establish or refute that which was only provisionally accepted, to take it from the limbo of uncertainty and the region of the possible, and place it either among accepted truths or relegate it forever to the domain of exploded fiction.

The certainty that by co-operative effort error will, however plausible, be exposed and elminated in the long run, tends to make men less vehement in the defense of views still open to question, and more tolerant of the opinions of others. Though like results would undoubtedly be attained through individual investigation working apart and communicating its results to the public through the ordinary channels, yet by co-operative effort these results are compassed more speedily, and sooner placed upon an enduring basis.

Men cherish their opinions as they do their offspring. Mischevious notions, when once they obtain currency, often work baneful results before their fallacy is exposed. They are earnestly and vehemently defended, and as earnestly and vehemently assailed. When a speedy confirmation or refutation is impossible, they entrench themselves with an ardor, and maintain their defenses with a tenacity, which stimulates corresponding vehemence in the assault. Many of the riots which have afflicted the world are traceable largely to this intemperate conflict of opinion. Wars of words have not unfrequently given place to wars waged with more destructive weapons; and the stake and the battle-field have enforced, for a time, a unanimity of opinion, which, while it lasted, proved the paralysis of intellectual activity. By voluntary association and co-operative effort, evils such as these, similar in kind but less in degree, have either been avoided or reduced to a minimum.

The results of associated effort have already been conspicuous in bee culture.—Within a quarter of a century the net returns from the honey bee have increased more than one hundred fold. The habits of the industrious little worker have been carefully studied, its natural history has been investigated, the laws which govern its reproduction and development have been learned, and the conditions of its remunerative activity have been made known.

All this knowledge would have become the property of the scientist and the producer in time, but the old routine has been set aside, and the slow course of development which satisfied investigators and producers in the time of our fathers, has given place to a united activity by which the area of knowledge has been rapidly widened, and the aggregate of production increased many fold. Thousands of tons of the most delicious food, whose sweetness had been for ages literally wasted upon the desert air, have been added annually to the stock formerly known and available, and thousands more will be added year by year from the same source of supply.

I am persuaded that this industry is still in its infancy, and that in the future, when bee culture shall have been extended, as it undoubtedly will be, not only means of livelihood but avenues to wealth will be opened up to the industrious and the frugal from this source of remunerative activity, the value ot which I should hesitate to estimate.

It is, therefore, with pleasure that I see the beginning of a movement in Northern and Central Kentucky to develop an industry which our rich and broad pastures, and our blossom-bearing fruit and ornamental trees are eminently adapted to encourage and render profitable.

H. C. Hersperger, of Jessamine county, delivered the following interesting essay, on

BEE-KEEPING, A SOURCE OF WEALTH:

In the present state of society, when every one is living up to the full extent of his ability, it is wise to make money from all the honest sources within our reach.—That we may learn to make money from the management of bees is our business here to-day. If we can, by intelligence in the application of science to their habits, make them a source of wealth to our people and the nation, we will have done much for the good of society.

We hear of bees from the earliest ages down to the present time. They are spoken of in the Bible, many centuries before the Christirn era, and in the writings of Virgil and Columella; but they seem to have had no management except that which was dark, mysterious and uncertain. No good results are reported of them. The correct understanding of their natural history, and the proper application of art and science to their habits was left for Huber and Dzierzon, and Langstroth and Quinby.

The laws which govern bee instinct were unknown to them. The science and art, so applicable and essential in the successful management of them in the present day, were unthought of in the past, as they are unthought of now by nine-tenths of our people. The light had not yet come out of them. Fitty years ago, the light had not come out of steam and electricity. Now they are the motive powers of the world, bearing telegrams to every part.

Of course, we do not claim for bee-keeping a place among these wonderful agencies, but we do claim for it a place among the industries of our people, capable, by intelligent management, of giving as good results for the outlay as are obtained by any work done upon the farm.

It appropriately belongs to farming.—Farmers have the soil and the flowers, and where forage is wanting, they can supply it by sowing and planting. And it is to them I especially direct my thoughts today. The flowers upon your fields, meadows and waysides contain in their tiny cells a sreasure—a delicious sweet, secreted day by day, and unless some arrangements are made to gather it in, will be daily wasted upon the air. It is this saving, this gathering from every available sourse that brings thrift and success to the farmer.—Shall we let this treasure of the flowers be wasted in our fields or shall we gather it in, is a question worth consideration.

He is a poor economist indeed, who suffers available treasure to go to waste around him. What would you think of the farmer who would not gather the golden grain when it was ripe and waving in the fields? Or, what would you think of the man who would harvest the new crop and let the old crop go to waste? The man of thrift gathers and saves from every possible source. He lets nothing go to waste.—He gathers in his corn and his wheat, his rye and his barley, and he gathers also the honey from the flowers of his fields. It is his. He pays nothing for it. Genial nature plants the flowers and fills their cups with honey, and he gets it simply for the taking of it, and thus saves what would otherwise be lost.

Now, are we at liberty to neglect the development of an industry that can, by proper management, be made to bear fruit an hundred fold, and thus add to the happiness of our people and the wealth of our State ?

We are told by Prof. Shaler and others that we have untold mineral wealth in our mountains. But the great question of the day is, how to reach it. Legislatures have met and adjourned ; conventions have done the same ; the wise heads of the State have talked the matter up, but still the work remains undone. There is no highway opened up to these mines of wealth.

My own country has expended 20,000 dollars in the matter, without one cent of return. And, I fear, before these vast riches are brought to our doors, we will all have gone to our long resting places.

But it is not so with the flowers. We want no highway to reach them. They are all around out doors. They are in our fields, and the honey is in them, and each one of us is responsible for himself, if he does not prepare the little, winged harvesters to gather it in.

As I said before, it belongs to farming, and pays as well as any work done upon the farm. The returns for the investment and labor are as good as the returns from any of the products of the farm. Am I saying too much ? Have I made an assertion which I cannot sustain ? My aim is not to be extravagant, or say one word in this matter which is not strictly in accordance with my knowledge and belief. My experience as a bee-keeper is the very best evidence I can offer. I have taken 4 crops in succession, and they have paid me more than 100 per cent. on the investment. They have averaged me, for the 4 years, more than $12 to the colony. For the last 2 years I have kept 30 colonies, and they have given me $12 to the colony. What better can you do with wheat, corn or hemp ?

Many of our people at this time are turning their attention to sheep husbandry, and they think it pays well. But, take 30 sheep, a fair average for an ordinary farm, and make your calculations and see if they will yield $12 profit per head. They will require more care than your bees, the year round.—They will cut down your grass, and they will not yield you $12 per head, notwithstanding you have a protective tariff for your wool and I have none for my honey.—Thus it appears that bee-keeping is fully equal to, if not better, than sheep raising.

Again, for the last 2 years I have taken from 30 colonies 2,000 lbs. of honey each year. Now, if I can raise 2,000 ℔s, can not my brother farmers do half as well and raise 1,000 ℔s ? Doolittle, of New York, took last year over 500 ℔s. from 1 colony.—But suppose every farmer in Jessamine county would make 1,000 ℔s. instead of 2,000 ℔s. as I have done ; and as we have just about 600 farms, of 200 acres each, it would make the round sum of 600,000 ℔s. of honey for Jessamine county.

I consider this not beyond the capacity of our county when the seasons are at all favorable, but I doubt whether our farmers will make 1,000 ℔s ; therefore, I will divide it again, and make it 500 ℔s, ¼ the amount I have taken, and about what Doolittle took from 1 colony only, and then we have for our county just 300,000 ℔s., surely within the reach of her people. And this, at 25 cts. per ℔., is $75,000 for Jessamine county ; and, as our State has about 120 counties, I will multiply that sum by 100, and we have for the State of Kentucky $7-500,000 annually going to waste in her flora. And as a source of wealth to the nation, let us multiply this amount by 30, leaving off 8 of the States, and we have $225,000,000 of wealth lying in the tiny cells of her flora.—Thus intelligent bee-keeping seems destined to become a source of untold wealth to our nation.

In this calculation I believe I am far under the true estimate. In a few years, you will learn from the census of the States and the nation, through experienced bee men, that the resources from this direction alone will be estimated at from $500,000,000 to $1,000,000,000.

But, of course, we do not all expect to make fortunes in this business. I do not discuss it for that purpose. The price of honey may change. The law of supply and demand governs the market price in all commodities. If we overstock the market with honey, as with any other product, the price will fall. Suppose it does. Who cares for that ? We still have a home demand in our families, which, if supplied, will be a blessing to us right here. This is the special view I wish you to take of it.—How many of our farmers are absolutely, sorely taxed for the sweets that go upon their tables ? How many are in debt, and how many are barely able to come out even at the end of the year ? To these I would say, keep a few colonies of bees, manage them intelligently, and supply your own families with this best of sweets, free of expense. H. C. HERSPERGER.

On motion, the President appointed the following committee on apicultural supplies and implements : H. C. Hersperger, Thos. T. Hayes and O. N. Featherstone.—After due deliberation, the committee brought in the following report :

> " We, your committee on apicultural supplies, recommend the Langstroth hive above all other hives, for convenience of raising box or extracted honey ; we also recommend the Bingham smoker as the most effective smoker. We approve of the half gallon glass jar with glass top, as the very best jar for comb and extracted honey. We also approve of the 1 and 2 lb. jars of C. F. Muth, of Cincinnati, for extracted honey. The extractors of Novice and Muth were both recommended so highly that the committee were unable to decide between them."

Mr. C. H. Dean, who had on exhibition a Simplicity hive, gave his views and preferences for the same, and said, that in following out the suggestions of A. I. Root, of Medina, Ohio, the inventor, he had made a half chaff hive, and approved of it, not only as a winter, but a summer hive. Mr. Hersperger said he could attest all Mr. Dean said about the Simplicity hive as in the cold northern climates. They had experienced great difficulty in bringing bees through the winter; but since they have used the chaff hive it seems to have given general satisfaction. In regard to wintering bees, Mr. Robt. Featherstone said the best and most successful bee-keeper he ever knew was a German, who simply left his bees on their summer stands, and filled the upper story of his hives with corn-cobs, which would naturally absorb all dampness that ascends from the bees, and acts as a ventilator and protection for winter at the same time.

Mr. Williamson explained how he wintered his bees safely by simply making a rough box out of common plank or old dry goods boxes, large enough to encase the regular Langstroth hive. Leave a space of from 3 to 6 inches all around, have the top lid loose, to slide, as on a two-story hive, make a small funnel, say ½x4 of thin plank, close up all the entrance in hive, except just the sizes of the mouth of the funnel, let the funnel extend even with the outside of the rough box, and it is complete.

They wintered all their colonies safely. The boxes will last for many years, and the hives might be left in them all summer with equally good results, particularly where there is no shade; he agreed with Mr. Featherstone in regard to filling the upper story with corn-cobs or straw, or a thick chaff mat, instead of the honey board; of course, in this climate, the same protection is not necessary as it is in northern climates. The main points of wintering in this climate is to break the wind and give ventilation without draught..

Thos. L. Bryan asked if an air space for wintering would not answer as well as chaff. The President said it would, as he had proven by many practical results; for instance, he said, a dwelling house built with a double wall, and an air-space of only two inches, was always the driest and warmest house in winter, and the coolest house in summer.

Mr. Williamson gave the following address on

HONEY, AND MARKETING IT.

The subject of honey and marketing it, is one which conerns nearly every bee-keeper, and very properly too, because in these, aside from pleasure, rests the just reward of study and labor; for it is fallacy to think, without study and labor in bee-keeping, as in all other pursuits, great results can be accomplished. In marketing honey, it should never be forgotton that a good article in an attractive form will always command the highest price, the best reputation and a steady demand.

We see this illustrated every day. The confectioner assorts and classifies his candies and fruits; in fact, arranges everything in his store in the most tempting style, to captivate human taste and appetite. The druggist adorns his packages of powder with lithographs of beautiful women, his toilet soaps are put up in delicately perfumed boxes; and thus it is in every branch of human industry—the great aim of the "knowing ones" is to make things look attractive.

At the present time, in large cities particularly, there is more demand for comb honey, in small frames and boxes, than for extracted. This result is due, in a great msasure, to the frauds that were practiced in former years, by manufacturers of what was called "strained" honey.

Extracted honey is the purest honey possible, and physicians have often denounced the idea of eating honey and comb also; and when the useless and injurious effects of eating comb honey is generally understood, we shall shrink from eating it as we would from eating glass.

Extracted honey may be eaten at all times with perfect impunity. Our Jewish friends use honey in many of their religious rites, particularly in the Feart of the Passover, and so strict are they in regard to its purity that the price to be paid is no object. The rabbis instruct them to buy candied honey as a precautionary measure against impurity.

And when we consider that pure honey is the *very* essence of flowers and plants, in which, we are told, there is a remedy for every disease, surely we can not doubt the happy combination of honey as medicine. The Scriptures tells us in many passages of the wonderful efficacy of honey as food and medicine. And I believe as the treatment of disease becomes more and more rational, so will the value of honey as a medicine become more and more apparent. Honey has generally been looked upon as a luxury. The price has been considered high; the consequence is that fashionable golden syrups have been filling the place that honey ought to occupy, and which honey is now fast superseding as the injurious effects of these syrups become more generally known. We have often wondered what discolored our teeth after eating certain syrups and drinking tea. Can we doubt but that it was the chemical action of the acids used in the manufacture of these syrups? How often it has been proven by analysis that these syrups are adulterated with injurious chemicals, in order to give them that bright golden color so inviting to look at—while pure, extracted honey is as free from all impurity as the dew drops of morning; and I believe the time is not far distant when the use of honey in every home will become as common as "household words." WM. WILLIAMSON.

The Secretary read a communication from the Executive Committee of the National Bee-keepers' Association, which was received and filed, also a communication from W. J. Davie, M. A., State Commissioner of Agriculture and Statistics, after which was read Mr. Davie's interesting article on Bee Culture, "from his first annual report of 1877."

Mr. Ollie Redd asked if it was proper to try to prevent bees from swarming.

Mr. Hersperger said it certainly was, and the aim of every bee-keeper should be to have his bees make honey, and not bees.—He said all colonies should be kept strong; and to prevent swarming, take out all the queen cells, put the bees into a new hive, place it where the old one was, and the change will cause them to imagine they have swarmed, and they go right to work. The difference between putting them back into an old hive and removing the whole colony into a new one is, that in the old hive they have taken the swarming fever, and will swarm again in 10 days or 2 weeks. He would not offer this as an infallible rule, but from one colony of his own, managed in this manner, he had taken 230 lbs. of honey. Mr. H. said he did not approve of clipping the queen's wings, to prevent swarming, as he had lost quite a number of fine queens by doing so. He believes the bees regard her as becoming old and defective, and go to work and raise another.

T. L. Bryan asked what constitutes honey-dew.

The President's explanation of the substance generally known as "honey-dew" was, that the trees and plants are besieged with innumerable little insects, who puncture the leaves, which causes the fluid to flow, on the same principle as a splinter puncturing the human system and causing blood to flow.

The Secretary then read the statistics, sent by General LeDuc, U. S. Commissioner of Agriculture, which showed that in 1870, when the last census was taken, that Kentucky stood third in the list of honey-producing States. The returns for that year being 1,171,500 lbs. of honey, and 32,557 lbs. of beeswax; and for the United States, last year, the crop of honey, at a low estimate, is put down at 35,000,000 lbs.

The Secretary read several communications from the Hon. T. J. Bush, in reference to the new law, passed by the last General Assembly, as follows:

Chapter 1026. An act to protect the bee-keepers of Kentucky. Approved April 10, 1878.

Said act reads as follows:

§ 1. *Be it enacted by the General Assembly of the Commonwealth of Kentucky*, That any person or persons, who shall sell or cause to be sold any manufactured honey, unless such honey is so represented and designated as manufactured honey, shall, for the first offence, be fined in any sum not less than $10 nor more than $100; and for each repeated offence shall be fined not less than $50, nor more than $250.

§ 2. That any person or persons, who shall sell or cause to be sold any manufactured honey which contains any substance injurious to health, shall, for the first offence, be fined in any sum not less than $10, nor more than $100; and for each repeated offence, shall be fined not less than $50, nor more than $250; and such adulterated articles, by order of the court, shall be destroyed.

§ 3. This act shall take effect from its passage.

On motion, a unanimous vote of thanks was tendered General LeDuc, U. S. Commissioner of Agriculture, Washington, D. C.; W. J. Davie, A. M. State Commissioner of Agriculture, Frankfort, Ky., and the Hon. T. J. Bush, for the valuable information furnished and kind offices performed.

On motion, the next place of meeting will be this city, on the first Tuesday in October next, at 10 a. m.

W. WILLIAMSON, *Sec'y.*

☞ Bees that go out of their hives in the morning in search of food or honey, from floating apiaries, find their home by comparative location, and their particular hive by form and color.

Correspondence.

For the American Bee Journal.

The Langstroth Hive.

EDITORS JOURNAL:—Will some of your many intelligent readers, who have had long and extensive practical experience in bee-keeping, as a specality, do me, and, no doubt, many others of your subscribers, the favor to state, through the columns of the JOURNAL, what, in their opinion, are the advantages of using what is called the "Standard Langstroth" frame that is 9⅞x17⅝, in preference to a frame of the same kind, but smaller dimensions, say 10x12?—I notice that in the last 2 or 3 years there has been a general tendency, especially in the Western States, to adopt the standard Langstrrth frame. Many bee-keepers incuring the great expense of transferring large apiaries. I can readily understand the convenience and benefits (to dealers in apiarian supplies, especially), of having every bee-keeper use the same frame; but taking into consideration all the advantages and disadvantages of the two frames mentioned, I cannot possibly comprehend why the "Standard Langstroth" should be preferred as the frame for all to adopt.

"Being shallow, bees will winter better, and go up into the sections sooner."—"Fewer frames are required; consequently, a larger number of colonies can be manipulated in the same length of time." These are about all the advantages I have ever heard claimed for the "Standard Langstroth." I have had no experience in wintering, as we have no winter here; but it is evident that the difference in depth of the 2 frames is so small (only ⅞) that the difference in results, if any, either in wintering, or producing comb honey, must be imperceptible.

The stooping position, necessarily taken by the bee-keeper in manipulating combs, is very fatiguing; and, as the combs must frequently be held for several seconds, and often minutes, as high as the head, in order to examine them for queen, eggs, &c., a very little too much weight tells fearfully on his back and arms in the course of a day's steady work. A 10x12 comb, completely filled and capped, weighs from 6 to 8 ℔s., and a 9⅛x17⅝ from 8 to 11 ℔s., and the broken down bee-keepers, all over the country, is sufficient evidence that the latter is entirely too heavy for any body that has a large number of colonies to handle. We especially pity the ladies who undertake such an enormous task. The murderous sewing machine, or the detestable wash-tub would prove an easier place; 10x12 frames are much less liable to warp and hang crooked than 9⅛x17⅝. Bees are more apt to build straight combs in the former than in the latter. Here the dealer in apiarian supplies will say, "*that is a dead issue*, use comb foundation and secure straight combs." But, comb foundation will warp and sag more in a wide frame than in a nrrrow one; and then again, new and partly finished combs are much more liable to be cracked or broken out entirely, in wide than narrow frames, in handling, and especially in extracting.

I have made bee-keeping a speciality and constant study for several years. Have upwards of 300 colonies, and secure an average of more than 100 lbs. extracted honey per colony, each year, but have not yet been able to discover any advantage to induce me to adopt the "Standard Langstroth" frame. Still, I am always willing and ever eager to learn, and perhaps some of our fellow bee-keepers may very readily show important points that I have overlooked. WILLIAM H. WARE.

Bayou Goula, La., May 20, 1878.

[Lest anything we might say on this subject might be construed to be said from some interest in selling hives, we invite some one to answer friend Ware, who is in no way interested in any hive. The superiority of the Langstroth hive may be easily demonstrated to any unprejudiced person, but we prefer to let others speak on the subject.—ED.]

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From the Los Angeles Star.

Preparing barrels for shipping Honey.

Let the barrels stand in the sun 4 or 5 hours, with the bunghole open, then go carefully over every hoop and drive it tight, for they can almost always be driven a little, if the barrels are new; then, if you wish to paint them, do that next, with some light colored paint, so as to reflect the heat of the sun, instead of absorbing it, as any dark color will do. Then take 10 or 15 lbs. of clean beeswax, put in an iron pot without any water, and heat it until it boils, taking care not to let it boil over and catch fire, which it would do very readily; when hot, pour it into the barrels with a large funnel; as quick as possible, put in the bung and roll and tumble it every way as fast as possible for one minute; then take out the bung and pour out the wax into the pot again, and, if quickly done, there will be only about one pound remain in the barrel. The hottest part of the day is the best time to wax barrels, and also the best time to fill them with honey; and it is very important to not fill too full, as honey expands and contracts a great deal with heat and cold.

If a barrel is filled in the morning when the honey is cold, to within 1½ inches of the head, and then set in the sun, by 12 or 1 o'clock it will run over; or if bunged up, it would strain the barrel and leak afterwards, so it is not safe to fill closer than 2 or 2½ inches of the head; and if the barrel is filled on the side, not less than 3 or 3½ inches. When filled, take a wet cloth or sponge and wipe off any honey that may be on the edge of the bunghole; then take a piece of thin cotton cloth and dip it into hot wax, both sides, put it over the end of the bung, and drive it tight, cut off what cloth remains outside close with a knife, dress off the bung smooth, and take a hot soldering iron and go over and all round the bung with wax, as if it were solder, and soak it in wherever it will go, then nail a piece of tin over it and you need not fear your barrel leaking honey.

E. W. SINCLAIR.

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For the American Bee Journal.

Chips from Sweet Home.

As bee-keepers, as well as others, are sometimes troubled with felons, and such pets are not pleasant, I will give you a cure which I have never known to fail:

Take plug tobacco, pick in pieces and boil in soft soap; make a poultice of the leaves and bind on the felon. You will find that it will quit paining immediately, and will continue easy till the poultice is dry.—When dry, and it commences to pain, put on another poultice which you have boiled in soft soap. Continue this until it quits paining when the poultice is dry. This will occupy from 6 to 10 hours. I have never known this to fail, although 4 or 5 days gone. Try it.

To hold Prize Boxes together on the double portico, Langstroth hive, nail 2 pieces, ⅞x⅝x26 in. on top of 3 pieces 8/4x⅞x15 8/4. One of the 3 pieces should be nailed in the center, against which the 2 inside boxes, of 7 sections each, is snugly placed; and the other 2 boxes is snugly placed against the 2 end ones. The separators are 5x12½. These not only keep combs straight but hold boxes firm and prevent them, when wedged together, from slipping by each other. At each end is placed a glass.

STATISTICS ON HONEY AND WAX.

The executive Committee of the National Bee-keepers' Convention has appointed one person in each State to gather information as to the amount of honey and wax produced in 1877, also the number of hives, &c. As I have been appointed, I would ask the assistance of each bee-keeper in Illinois, that we may make the best report of any State. At our last convention, we were surprised to find the amount of honey and hives kept by 70 persons. The Secretary will give the report soon. I wish each bee-keeper in Illinois would send me a postal card, giving me the names of the bee-keepers in his neighborhood, with number of colonies each had in the spring, and the amount of honey and wax produced in 1877. Those of you who read this, do so at once; *don't forget it*, and be sure to give as near the exact number of colonies and amount of honey and wax produced in 1877 as convenient. Also give names of bee-keepers, hives, honey and wax of your neighbors, whom you think will not see this. Be brief, as follows: D. D. Palmer, 150 colonies, 15,000 lbs. honey, 24 lbs. wax. By this means, I will collect the whole, if possible, and make a synopsis and send to the National Convention. Address, D. D. Palmer, Eliza, Mercer Co., Ill.

R. C. OTIS.

When a prominent apiarist falls from the ranks, we, as small bee-keepers, like to know something of their whereabouts. R. C. Otis, of Langstroth bee-hive law-suit fame, through over taxation of the brain, became an imbecile of Mount Pleasant, Iowa, Insane Asylum; where, I am told, by Mr. Thomas, of that institution, that he died after suffering from softening of the brain. Mr. Thomas says he paid but little or no attention to anything. Will Mr. Thomas give, in the AMERICAN BEE JOURNAL, the particulars of his last days?

OLD QUEEN GOING WITH SWARM.

Among bees, like all other animated nature, there are exceptions to all general rules, e. g. The old queen goes with the swarm. I never knew but *one* exception to this. In the summer of 1877, a colony swarmed twice; both times taking a young virgin queen and leaving the old, laying queen in the hive.

June 3rd, and no surplus boxes yet. May has been cold and wet. We are building a honey house, for storage of 30,000 lbs. of honey. We believe in setting our mark high.

CYPRIAN BEES.

MR. EDITOR.—I, like many others, wonder when I see Cyprian bees advertised in the AMERICAN BEE JOURNAL for the low price of $5; and they are pure, for the advertisement says "No impure bees in my locality;" also imported Italian queens, $3.75. At these figures, we want some of those queens, if we can be assured by parties who have bought of him that they are pure, but out of the many, I cannot get one to answer favorably; in fact, they are silent.

As you were lucky enough at our Bee-keepers' Convention to draw a queen of Hardin Haines, please send me a setting of eggs.

PRIZE BOX HOLDER.

The one I have invented for my double-portico Langstroth hive is made as follows: Take 3 strips ¾x⅜ of an inch, and as long as the honey board is wide, *on* these put a strip at each end ⅝x⅜ of an inch edgewise. This will hold 4 rows of 7 sections each.

"OUR HOMES" DEPARTMENT.

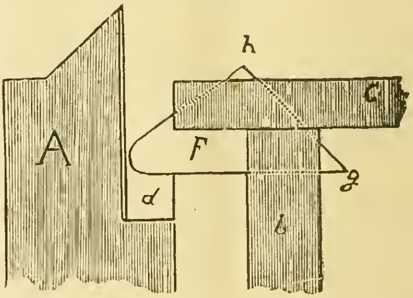
A. I. Root, in the June number, under "Our Homes," gives one very mild letter from Mass., in which John D. White asks, "Would it not be better to leave the religious department out of *Gleanings?*" &c. A. I Root says in his religious comments on this, moved by the Spirit, of course: "I have had, perhaps, a half dozen similar letters in the past 3 years."—Now, Novice repent, and have your God to straighten you up, for in this neighborhood I *know* of (no "perhaps") a half dozen "similar letters," only much more so, being sent to you, and if your 3,515 subscribers would average as many "similar letters," to you, as a few do here, your "perhaps a half dozen" would number over 1,000. I am a liberal minded bee-keeper. I do not want MYSTERY written on my hives. We would like *Gleanings* if not spoiled with so much baby talk in "Our Homes."

I had a talk with a neighbor bee-keeper, one of the best informed on bees we have; he is also a writer of Scraps for the AMERICAN BEE JOURNAL, as well as *Gleanings*. He says he has written Novice a "half dozen similar letters" himself. We have plead and reasoned with him to do to others as he would have others do to him. Would he wish Catholics, Jews, Turks, infidels, heathen, &c., to take an underhanded way of forcing their ideas upon him? I have taught school for 5 years, and what would I think of a pupil doing wrong every day; yes, perhaps every hour, but as constantly asking my forgiveness and making new promises that he would do better, but as often breaking them, with the idea that he could make another promise as good?—Such a pupil is Novice, but what does his teacher think of him? D. D. PALMER.

For the American Bee Journal.

Kretchmer's Metal Frame-Bearings.

In the illustration accompanying this article, *A* represents the end of the hive; *d*, a metal rabbet of folded tin; *b*, the end piece of a frame; and *c*, the top; whilst the tri-angular piece, *F*, is a piece of galvanized sheet iron, resting edgewise across the metal rabbet, and supports the frame. In making the frame, the point *g* is, by the use of a guage block, driven centrally through the end piece of the frame, and the point *g* clenched; the top is next driven over the point *h*, and the point clenched, so that the piece *F* has a position in the centre of the width of the frame; the dotted lines indicate where it passes through the wood.—Although the clenching alone gives it the strength of an ordinarily nailed frame, the frame is, in addition, nailed in the usual way.



Before enumerating some of the advantages of this bearing, I desire to state that this is not a new, untried idea. I have had over 5,000 combs built in such frames, and have used them over 8 years, testing their merits by the side of nearly every device known for the purpose, and hence claim to know whereof I speak.

Some of the advantages are:

The frames are never glued to the rabbets, as the point of support is less than the head of a pin, the bees passing under, over and between, at pleasure.

In the metal rabbets are cut, with a single file stroke, small V shaped notches, at such distance apart as it may be desirable to have the distance of the several frames from centre to centre; in these small notches the bearings, *F*, rests; the frame is simply set on the rabbet, and by a slight movement of the finger, they glide into their proper places and stop; and not only aiding the beginner to set his frames at proper distance, but also greatly aiding the expert in the manipulation of the frames.

In carrying a hive, the frames cannot slide together, and if, perchance, the hive should not be level, the frames will always assume a perfect perpendicular position, and retain their position on the rabbets, even should the hive be tipped 30°. The assertion that the filling with honey, of one side of the comb, would cause the same to swing out of perpendicular, is not sustained in practice, as the distance from the centre (the point of support,) to the outside is too small, compared with the depth of the comb or frame, to make it perceptible in practical operation.

The notches in the rabbets do not make the frame *fixed* at always the same place, the notches being so small permits the frame to be set at any place on the rabbets, should an extra thick comb make such change necessary.

The pieces, *F*, greatly strengthens the frame, acting as a corner brace, and when the points are properly clenched, the frame may be used without any additional nailing; but when nailed, they have strength to support 30 lbs., without giving way.

Nails, staples, or wire driven into the end of the frames add nothing to their strength; and frames thus arranged are more or less glued down, as they present a larger surface, and if set in notches, requires the notches to be considerable deeper to make them effective.

The liability to crush bees on the rabbets is, in this frame, reduced to its minimum, there being but *one* very small point to be guarded.

The cost of bearings, *F*, is less than any other attachment, as they can be furnished ready cut, strengthened, trimmed, pointed and packed for about 15c. per hundred; and added to a frame as easy as to drive a nail.

From the present demand for these bearings, I am inclined to believe that others fully appreciate them as soon as they learn of their use; hence, furnish the foregoing description. E. KRETCHMER.

Coburg, Iowa.

[We have a small model of these pivot frames, sent by friend Kretchmer, for our Museum. They are simple, strong and cheap, and for those who desire metal-bearings, that the bees cannot fasten with propolis, are quite desirable.—ED.]

For the American Bee Journal.

Comb Foundation, Marketing, &c.

The season of 1877 was very good in this vicinity for early honey, but the drouth of last August cut off nearly all the late harvest. I extracted 3,556 lbs. from the upper story, only, of 26 colonies; 41 colonies produced 1,064 lbs. of choice comb honey, in sections and glass boxes. I sent 12 lbs. of yellow wax to J. H. Nellis for comb guide, and received a nice article in return. I would not advise ordinary bee-keepers to make their own comb guide, when it can be bought for much less than when it is manufactured on a small scale.—I used to think that artificial comb guide would injure the market for comb honey, but now I do not believe it will, if properly used. I sold nearly all my honey in the home market, and could have sold, at least, 2 barrels more. I am in favor of selling more honey to wholesalers, that it may become a staple article in all markets.—However, if wholesalers cannot find a demand for the vast amount of honey now produced, and it remains dull, on the hands of the retail dealers, then we must sell more at home.

Mr. Editor, I fear there is too much *hive* honey disposed of for the welfare of our market. If bee-keepers will try and produce a better article, they will find the demand stronger. Thus, when conditions are as they should be, let the brood chamber alone, and obtain surplus honey from proper surplus arrangements above. It is a mistaken idea that dealers will invest in anything that can be taken from a cluster of bees. Something *more* than a *mere* semblance of honey is required. Hence, it is very important to obtain honey in a higher degree of perfection than a large portion of it generally is.

Extracting surplus honey from the brood chamber should be discouraged, for two reasons:

1. Because it is an injury to the colony.
2. Such honey is seldom a No. 1 article.

Obtaining comb honey from the brood chamber is rather to be discouraged, as slow comb building and filling early in the season gives the general appearance a yellow color. It being in close proximity to the young bees, and where so much pollin is constantly stored and consumed makes this mode objectionable.

Two or more kinds of honey should *never* be put in the same cask, where each original flavor cannot be retained. All recepticles, even new, should be well rinsed with pure cold water, and well dried before using; and either extracted or comb honey should be stored in cool, airy rooms, free from impure air.

I think colonies are generally allowed to increase too much, for profit. More honey might be obtained, with less expense and anxiety on the bee-keeper's mind, during the critical part of the season.

It is a splendid country around here for honey, but the winters are too cold and changeable for successful wintering out of doors.

White clover is plenty, and the basswood abounds almost everywhere, but the heavy rains have retarded the honey harvest materially. Strong colonies had their boxes full of bees, and up to June 5th had some honey capped. EDWIN PIKE.

Boscobel, Wis., June 15, 1878.

Portland, Oregon, May 1878.

"Thanks for your Honey pamphlet. I consider it one of the best things out."

T. BRASEL.

For the American Bee Journal.

Things in General.

DEAR EDITOR : You will recollect my being at your office this spring, as you was about to depart for the Burlington Convention. I must say I was well paid for my visit to the AMERICAN BEE JOURNAL office. It is worthy of a visit from any one interested in the science of bee culture. We need just such an establishment ; and it is for the interest and well-being of apiarists to support and maintain such. We hope that friends Newman will not cease in their efforts to advance the science of apiculture. There is much to be done yet, and one item of special interest is marketing. We must establish a home market ; create a demand at home, let our neighbors know what good honey is ; and not let our home market be monopolized by old fogies who deal in a conglomeration of wax, pollen and honey. All progressive bee-keepers should take the AMERICAN BEE JOURNAL, read it and grow wise ; they will never regret it.

After leaving your office I went to my old home in New York State ; I then departed for Michigan in search of better pasture and locality for keeping bees, and am well pleased with this section of the State, for it abounds in white clover and raspberries. And I am informed that bees obtain honey very plentifully in the autumn, but from what source I am unable at present to say.

As an illustration, I will give you the product of friend Bidwell's apairy for 1877. Beginning with 17 colonies, he increased to 34, and obtained a surplus of over 2,000 lbs. of comb honey. Mr. Bidwell came to Michigan some four years since from New York state, and started with one colony of bees, buying another one also the second year. He uses the vertical-bar hive, and strange to say is not in favor of the movable comb. Mr. B. uses sections of 2 lbs. each, made of two pieces of ¼ inch pine, about 6 inches wide, 12 inches or more in length, divided into sections with strips ⅞ inches wide of same stuff, a groove being sawed every two inches in the 6 by 12 inch pieces. These are easily split off as required, forming neat sections of about two pounds each.

G. A. WALRATH.

West Bay City, Mich., June 11, 1878.

For the American Bee Journal.

Sad History Repeated.

FRIEND NEWMAN : Perhaps you remember my writing to you last fall, telling you the past season had been the poorest I ever saw, and expressing my fears about wintering, &c. You wrote me you hoped my fears would not be realized ; but they were, and fourfold, too. Out of 104 colonies, I now have but 26, and some of them very weak. One hive that swarmed 4 times last summer is among the strongest, and it has been my experience that hives that swarmed 4 to 5 times often come out among the strongest the following spring. You see that I am not a believer in the theory that bees swarm themselves to death. They sometimes lose their queens on their fertilizing tour, and it as often happens with those that swarm but once or twice as otherwise.

I started in the spring of 1877 with 78 colonies, and most of them very strong. They commenced in the boxes earlier than usual, but the drouth in May caused white clover to be scarce, and when in June it commenced to rain, it invariably cleared off cold ; and this was kept up till after basswood bloomed. In fact, the bees were killing their drones when it was in full bloom, and soon after the weather came off dry and very hot. Goldenrod came into bloom the last of August, and on the 30th a hive on the scales gained 1 pound. On the 31st, it commenced to rain and was cold, and they did nothing for 12 days, then they gained about 7 pounds in 6 days ; then it came on cold again, and that was the last. I suppose about $200 laid out in sugar for them at that time would have kept about 100 colonies active ; but the $200 to spare was what was the matter. Some have lost all, and some but about half. One man told me he started in with 21 last fall, and came out this spring with 3 only ; while some men within 10 miles of us wintered with small loss.

I have concluded that having the eggs all in one nest don't pay, especially in a beehive in this locality, consequently, have sold my house and lot for $2,000 (and my neighbors all say at a sacrifice of $500), and intend to lay out the money in a small farm, and keep sheep or some other stock, as I am not able to do much work, and may keep a few of the pets, if where I settle should prove to be a good locality.

Can any of our friends inform me about East Maryland. I see farms are advertised as cheap there, and as I think a milder climate will be better for me and two of my children, I intend to go and see the country, and may visit friend Porter, at Charlottesville, Va. He tells me bees do well there. But I have never heard as to the prosperity of bees in East Maryland. My first swarm came off yesterday. H. B. ROLFE.

Westfield, N. Y., June 8, 1878.

For the American Bee Journal.

Moore's Section Boxes.

DEAR EDITOR:—I have been expecting for some time past to send you one of my section boxes as I use them, but I have been so very busy with the bees, and for them on account of being hindered in building a honey house, that I have had no time for anything else.

As fast as the sections are removed from the cases on the hive, glass is adjusted to edges of uprights and the caps put on, making a tight box very quick. If it should be necessary to open the box at any time before shippment, the caps are slipped off and readjusted with very little trouble. Before shipping, the caps are removed and a very little warm glue is put on with a brush causing them to adhere to the sections making a perfectly tight box.

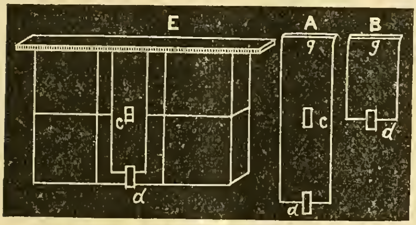
For shipping, I use crates holding 1 doz. boxes, setting them in 2 rows glass to glass, the rim of cap preventing any breakage, making a perfectly safe package for shipping long distances, and a neat and most attractive package on the counter. I had some caps made with narrower rims (some ⅜ and some ½ inch) than sample, but I think sample size shows best.

I am making sections this season 2 inches wide, and the uprights only 3-16 thick.

You inquired as to how I used separators. I did not use them last year; sold our honey cased up in about an equal number of one and two-comb boxes.

In referring to caps I should have said, they are made to accommodate any number of sections, making as large or small a box as one may desire.

We are using separators in all the cases this season. We use both side and top cases. Side cases are 15x12x4 inches, inside measure, holding 12 sections 5x6 inches, top cases 15x10¼x6, holding 15 sections.



Above is a sketch of separators, also side case of sections with separator in place. I use tin 12x12 inches, cutting those used on side cases 12x4 inches, and those for top cases 5⅝x4. *A* represents separator for side case, with end (*g*) turned over ¼ inch at right angle with balance of strip at top. Slots are cut in tops of cases (*E*), and separator (*A*) slipped down between sections, strip (*d*) holding in place at bottom, and resting on on flange (*g*) at top. There is also a slot (*c*) cut so as to allow a passage for bees at bottom of top, and top of bottom tier of sections. These side cases are set down on bottom of hive between division board and side wall of hive. In top case I use 15, one to each section, they hanging by flange at top, same as those in side cases.

I send you a box filled last season, charges prepaid. Yours, truly, J. E. Moore.

Byron, N. Y., June 18, 1878.

[Thanks, friend Moore, for the boxes.—They are very nice, and the idea is excellent. Easy packing, safe transportation, and attractive packages are the points to recommend any plan of marketing, and yours have all these points of excellence.—The "caps," friend Moore speaks of, are made just like paper-box covers, and pass over the box and glass just in the same way, both at top and bottom. Any size of sections may be treated in the same way. —Ed.]

For the American Bee Journal.

Wiring Comb Foundation.

I see the cry from all quarters is: "Sag, sag, sag." I, like many others, discarded it a year ago, till some improvement was made to remedy this.

Last winter, as I was having my "winter dream," for all bee-keepers know what "winter dreams" are; we dream all winter long, about what big things we intend to do the next summer. Well, this is one thing I dreamed, and have been practicing it this summer with great success. Before nailing up the frames, I punch about 4 or 5 holes in the end bars. Then after they are nailed, run No. 26 wire across the frames 4 or 5 times, then place the foundation in the sun about one minute; then lay it in the frame, run a gum rubber over it, if you have one; if not, press it down on the wires with your fingers. This presses the wire into the foundation, and it remains there like a charm. Take a small brush and fasten to the top bar, as has often been described.—Place these combs in the centre of strong hives; and use them in new swarms.—Shade or no shade, but "never a bit will they sag." And after they are built, if "Mary Ann" should happen to drop one, there would be no reason for "getting up on your ear," for they would not break.

D. S. Given.

Hoopeston, Ill., June 21, 1878.

For the American Bee Journal.

Cyprians.

Judging from correspondence received, there is much interest awakening in regard to the introduction of this new variety. We are often asked to state the difference between them and the Italians—how their hybrids behave and work; whether they are superior to the Italians in gathering honey; their ability to winter without spring dwindling, docility, etc., etc.

A portion of these inquiries we are able to answer; concerning others we are in the midst of experiments and do not care to draw upon our imagination, or venture an opinion until we can do so with some degree of certainty.

The points claimed for the Cyprians are that they equal the Italians in all desirable qualities, and surpass them in prolificness and ability to winter with less loss.

In appearance the workers closely resemble the Italians, but are lighter and handsomer. The upper and posterior portion of the thorax has a broad yellow margin, which readily distinguishes them. The queens we have thus far received or raised do not have the upper side of the abdomen as light as the average Italian queens.

These bees have been described as being longer and slimmer than the Italians, we however do not find this to be a noticeable feature. The comparative length of the tongue will be determined by Prof. Cook, who has kindly offered to make a careful microscopical examination.

In docility they equal or excel the Italians. The comb having the queen thereon may be taken from the hive, and the queen will tranquilly continue her laying, the workers adhering to the comb with great tenacity.

The queens are exceedingly prolific and fill the comb very evenly with eggs, seldom skipping cells. We found sealed and hatching brood the first of December, and when examined the first of February, the combs were well filled with eggs and brood. On the first of April no stock in the yard was more populous.

As we had little or no trouble with spring dwindling this seassn no comparison on this point can be made.

Any points of superiority or inferiority we may discover we shall announce through THE JOURNAL.

We have experienced great dificuly thus far in obtaining bees from the island alive. We look for the arrival of an importation early in July, and as they are to be sent according to our directions, we expect to receive the greater part, if not all of them, in good condition.

We consider the Cyprian a higher grade bee than the Italians, and think they are destined to be a popular variety.

Will not some one import the Carniolan bee and test its merits?

C. W. & A. H. K. BLOOD.

Quincy, Mass., June 20, 1878.

For the American Bee Journal.

"Floating on the Stream of Time."

FRIEND NEWMAN:—I left New Orleans May 18th, with 61 colonies of bees; all except two or three very strong with bees, and two-story hives. I closed the hives on the 17th, the weather being quite warm all the time. I stopped at this point the 24th, at 6 p. m., deeming it unsafe to keep them confined any longer. I found them very restless after the fourth day. My bees are on the bank of the Mississippi River close to the water. Bees have been doing well here this season. I was too late, as the season is three weeks ahead of the usual time. I stopped to rest my bees, and will remain about ten days. The weather is quite wet here; plenty of white clover now and some persimmon. I have been inquiring about the country between Cairo and St. Louis. Some would say one place and some another, and the truth is, no one not a practical bee-keeper is to be relied on, for they don't know. I passed a fine place and stopped here, but I shall try the Illinois River next week if health will permit. I wrote several bee-keepers about localities, but only two responded—friends Palmer and Mr. Riehl of Alton. It is the first undertaking of the kind, and what success there is to be will depend upon the season, as it does at all times.

The floating apiary of Mr. Perrine started from New Orleans the 14th inst., and I passed her tied up sixty miles above New Orleans on the 19th. At that rate it will be some time before Cairo is reached. Comparing it to my own trip, I don't see anything to encourage its owner. Every one on the river has heard of "that 2,000 hives coming up the river." When the boat, (James Howard, which I was on aboard of), came along with bees there was some excitement. All asked if it was that great floating apiary. Captain O'Neal would tell them it was the "Flying Apiary," and he had it on board to amuse his passengers. If Mr. Perrine succeeds I am sure of success, for I have superior advantages. But I know I will not overstock the honey market in America, and Mr. Perrine has no greater show to supply "all Europe."

W. B. RUSH.

Wittenburgh, Mo., (opposite Grand Tower) May 28, 1878.

[We understand that Mr. Perrine had an accident; something gave out on the steamboat, and he had to return to New Orleans with it to be repaired, leaving his "Floating Apiary" 60 miles up the river. We understand that it is now *floating* proudly along, (behind the steam tug), and will put in an appearance in due time, if nothing unforeseen prevents. Dr. Rush is *now*, June 20th, at Pekin, Illinois, and reports his bees in good order, gathering rapidly. So much for floating apiaries.]—ED.

For the American Bee Journal.

Bee Notes from Georgia.

I inclose a specimen of a plant that I think is Melilot Clover. I discovered it accidentally. Had no idea there was such a plant in this part of the country. I think with it we can be certain of a honey crop, and a large one too, if it continues to be as good as it is this year. I have never seen bees as fond of anything as they are of this, and it has such a profusion of bloom, and I am told it blooms for more than a month. It stands about 8 feet high and is covered with blossoms. I held it in front of a hive, and in less than five minutes there were a half a dozen of bees as busy as they could be. I visited the field in which it is growing, and I don't think I ever saw as many bees working on one thing; the whole air seemed to be filled with them, and the plants alive with them.

My bees have not done as well this year as I anticipated, on account of the cold, damp weather during May. We lost two weeks of sour-wood bloom; the bees are busy working on them now, at least what are left of them, and will get a little honey. If we have a honey-dew we may come out all right yet. I am afraid it is rather late.

Speaking of honey-dew reminds me of a circumstance that happened a few years ago in connection with honey-dew; and while they are now discussing it through the JOURNAL, some one may be able to explain it. It was this: A few years ago our Sabbath School determined to have a social gathering of the different Sunday Schools in the neighborhood; so on the day appointed, the 20th of May, as near as I can recollect, there assembled with us about 1,000 people, and some horses of course. We all had a very pleasant time, notwithstanding the day was rather warm. But it all passed off pleasantly, and all went away well satisfied, and it seemed that the little busy bee was to be satisfied also, for strange to say, next morning the trees under which the crowd had spent the day were literally dripping with honey dew; and the strangest part of it all was that no where else in the large grove covering 20 or 25 acres, could any be found. I can't explain it, and would be glad if some one who is better versed in these things would do so.

I have one hive that has done well this year, I have taken 50 lbs. of comb honey from it alone. James F. Hart.

[The plant is Melilot clover. It is excellent for bees in any locality and grows on any soil and in any climate.]—Ed.

From the Detroit Tribune.

Bee Culture in Northern Michigan.

The lands in the above region are quite various in their character, as is shown by the timber, which in some places is scrubby pine, the trees thinly scattered and interspersed with oak, while in others it is a tall, straight, very thrifty—really beautiful growth of beech, maple, elm, white ash, basswood or linden, etc.; again thick forests of hemlock and cedar, dark and somber, are to be seen, or the ground is very closely set with massive white pines, arrow-like in straightness, waving their tall tops in the fresh breezes that blow across the great inland seas lying on either side. Large districts formerly covered by pine timber have been burned over and then occupied by a close growth of raspberry and blackberry bushes and small poplars, furnishing large supplies to the industrious bees, so that from many a region that appears almost worthless, and is now very desolate, an abundant and delicious store of nectar might be obtained.

To the question: "Where do your bees get so much honey?" An old bee-keeper living in a sandy pine region lying adjacent to Lake Michigan, jokingly replied: "I guess they get it out of the pine knots and stubs." This apiary is located a few rods from the water's edge, hence the bees have only a half range, yet they collect an abundant supply of honey for themselves, and, on the average, a generous surplus for the owner, the sources being the willows, poplars, early wild flowers, maples, fruit-bloom, clover, wild raspberries and blackberries, buckwheat and autumn wild flowers, such as fire-weed, golden rod and asters. The soil in sections where pine timber grows, is sandy, very light, and generally unproductive, though rye, buckwheat, and near the lake shore, fruit can be raised successfully.

It is in regions where the growth of timber is composed of beech, maple, elm, white ash, linden (basswood), with some ironwood and oak interspersed, that all sorts of crops raised in Michigan thrive astonishingly well, and that the apiarist finds his labors abundantly rewarded. Should the section lie within twelve or fifteen miles of the shore of Lake Michigan, it is especially adapted to the growing of all kinds of fruits. Tender fruits do not succeed so well inland, as the frosts are more severe. The soil where hard timber grows varies from a stiff clay to a rich, warm loam. The latter with a clay subsoil is most productive. The stumps rot soon and the labor of breaking up and tilling is not so great; it does not leach, nor does it show the effects of drouth as soon as the heavier soils. Roots, grains, hay and fruits succeed admirably. A yield of 30 to 40 bushels of wheat to the acre is often obtained. The snows are so deep that the ground rarely freezes; and near the lake shore the climate is much milder than that of the southern portion of the State. The vast amount of lumbering, fishing, shipping and settling going on furnishes a ready home market for all sorts of supplies, stock, etc., while railway and steamboat lines place the greater portion of this region in close communication with large cities.

For the apiarist these hard-timbered sections are particularly inviting, because the immense forests of linden, with large quantities of raspberry and blackberry bushes, and, in the fall, acres of fire-weed, goldenrod and asters furnish pasturage that cannot be excelled. The most beautiful and finest flavored honey the writer ever saw was produced in central Oceana county from the blossoms of the wild raspberry. The honey from this plant is very clear, sparkling, thick, remains liquid a long time, and possesses a very delicate and agreeable flavor; the yield is also extraordinary. The great linden forests send forth a rich perfume from their millions of tassel-like blossoms, which appear during the early part of July, and then the bees have a royal feast, the yield in good seasons being enormous. A neighbor secured an average of nearly 200 pounds of honey to the hive for several seasons in succession, obtaining at the same time a rapid increase in his stock. One of his hives yielded him 526 pounds of liquid honey in one season. The success of the writer in Northern Michigan has tempted him more than once to return to this portion of our State from which other considerations called him. Frank Benton.

For the American Bee Journal.

Honey Rack and Separators.

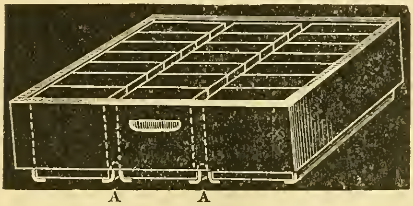
We who are putting up honey to ship must use the separators. How to do it is doubtless a vital question with many. After much experimenting I think I have made a desirable Rack. I wished one that would combine the following points, some of which Dr. Southards's supply, and some Mr. J. P. Moore's.

First—It is desirable to have the sections lengthwise over the brood-combs; for if across they are often built the other way.

Second—To have sections that will or can be used in wide Langstroth frames suspended and the size 4¼x5⅝ does meet this, and then use separators to match, as many of us are doing.

Third—A Rack that will fill the Langstroth hive and admit a separator of wood or tin, without fastening, except as all are wedged up and yet be bee-tight and tier up readily without vacant space between the tiers.

Now all are not agreed as to the superiority of wood over metal separators, claimed by many. With me it is a question of economy, as I use my grape box veneer, such as I make boxes from. No glass, and no fitting of separators, if cut right. I will here give a description in full. I first used sheet iron, but tin I find strong enough for three tiers deep and more easily cut and formed. There is no projections above or below and they tier up bee-tight. The object is attained 1st, of using sections lengthwise; 2d, of the least possible surface for propolizing; 3d, using only a few long separators, costing a trifle only; 4th, of tiering up bee-tight; 5th, to use same size section as in wide Langstroth frames.



Sides ⅝ thick and full width of 3 sections and 17¾ long. Ends ¼ thick and full width of sections and ⅛ less than width of hive and nailed on to sides. Mine are 14¼. The end supports are angle tin ¼ in. bent at right angles and tacked to ends strongly. The two middle supports A, A, are made of tin bent so as to be ⅛ in. apart, and to stiffen, insert ⅛ strip of wood. I tried both sheet iron and tin, but find the tin, if good, strong enough to support three tiers. These are fastened by a nail through the side; two nails may be used. The wood greatly supports and stiffens the arch.

The rack rests on two V shaped strips across the brood-combs. As the middle rests are ⅝ deep the separators have to be matched ¼ inch and they rest directly on the middle support and are in place.

Permit me to say good oiled cotton cloth is a cheap material for summer quilts. Brush on boiled oil on one side of stout brown sheeting, first well dampened, as sailors oil their clothing. I am trying it. Bees will not gnaw it I think, and it will be tight.

J. W. Porter.

Charlottesville, Va., May 20, 1878.

[This Rack, which friend Porter has so kindly made drawings of for the Journal, is intended for "tiering up," as well as to be used in single story on the hive. It came too late for the June number, or would have found a place in it, so as to make it of more value at this season. The cut will give a good idea of the Rack. The middle and end supports have been used by J. Oatman & Sons for a year past, as well as some others. As many are inquiring for a Rack to allow of "tiering up," this will be interesting, though we think that idea not so important as getting our surplus honey in desirable shape for marketing.]—Ed.

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☞ We keep Prize Boxes and Crates in stock at this office, and can supply orders, without delay, lower than the lumber for a small quantity can be bought for, in the country. See prices on last page of cover.

For the American Bee Journal.

Items from California.

On Feb. 1st I had 18 colonies, 3 of which were Italians (1 imported, 2 home-bred.) I have now 31 good colonies Italianized; brood is hatching and hives filling up fast. I had no black drones; swarming so far, artificial. I had several young queens to swarm several times, but none to go away that I know of. There has been some mixing of queens; one to-day got out and mixed with another swarm; the bees nearly deserted their hive, even with eggs and young brood just started. I saw the queen, but thinking her not mated, or not sure, let her fly (the bees coming out furiously), but the colony went into another hive; I examined but did not find her, but the other queen was all right. I found a nucleus to-day without bees or queen, although they had a laying queen a few days ago and plenty of room. Somehow I have lost a good many young queens; I think mostly by bee-martins; though I have found several outside of the wrong hive, dead. I had one hive to swarm out and return three times. Previous to this they had a light colored queen; since, they have a dark one. I have had to replace quite a number of queens that were lost.

This has been a good season for honey, though in re-queening I have lost part of its benefit. Shall have to use the extractor soon. I expect to be able to use foundation for comb, but delay in its arrival, have had to let bees make their own comb. I have introduced laying queens by smoking and shaking queen in front, letting her run in; also by smoking and shaking all bees from the combs and then shaking queen with a frame full of bees right among them; then putting combs in place and closing hive, in each case with success. I had a number of dollar queens last season from the East, but my imported queen is the cheapest; so far she has beat them all. Most of my young queens are from her. I think dollar queens poor investments. I had 5 of one party; 2 of two; 3 of one, and 2 of another. I have only 2 left and one of them has to be built up. I shall try imported queens this year. My last swarm transferred in January, filled their hive first and went into sections before others that seemed to be in better condition. Hives are mostly Langstroth. I don't pretend to be an expert in transferring, but I can beat the sticks or Novice's clasps. I use wire No. 16; first bent down one end ¼ inch; then bend down to fit width of top bar of frame; then to fit depth of frame; then to fit under bottom bar the width of bottom bar; then some pieces bent four square, with the ends nearly meeting. These go on ends of frame, the points or ends of the wire fitting into the cells and spring together. They do not take so much room as sticks; bees do not mind them so much; there are no strings to bother; they are removed by pulling out bottom and slipping off the top. If they are made to fit snugly, they make neat work; the lower part keeps the bottom bar from sagging. One set will last forever if the frames are all alike. I use up all pieces; with these it makes no difference whether full of honey or not, or how warm the weather. I raise my queens in nuclei of 3 frames, same size of hive; have three such of five apartments; shall make 2 more, so as to winter about 25 extra queens.

Napa, Cal., May 6, 1878. J. D. Enos.

From the Michigan Farmer.

Spring Feeding of Bees.

In this locality the white clover harvest has fairly commenced, but it is rather late this year on account of the cold, stormy weather, which has prevented bees from profiting by the early spring flowers—fruit bloom, &c. It is very seldom that a season occurs when spring feeding proves as necessary as it has been this year. Real winter weather disappeared quite early and there was every appearance of an early opening of the working season; under such circumstances, strong colonies of bees, especially those containing considerable honey, always start large quantities of brood. It only needs a few bright, warm, spring days to enable the bees to take one or two cleansing flights and get fresh water and new pollen, as well as put their hives in order, and they will go forward rapidly with the brood-rearing, which is generally commenced before winter is over.

It takes large quantities of honey to prepare the food for the young larvæ, as well as to sustain the rapidly increasing population of the hive; hence if cold, stormy weather ensues, the bees may be obliged, as a precaution against starvation, to discontinue brood rearing, or even to remove the undeveloped larvæ from the cells, and, if very short of provision, they will, in desperation, tear the pupæ from the cells; then comes desertion of the hive, or starvation, unless the bee-keeper is on hand to avoid such a catastrophe by liberal feeding.

There is great danger of this result if feeding has been commenced and then discontinued, for the additional brood the bees are induced to start must have food.—Such a case should not occur, however, and the bee-keeper will always find it to his advantage to secure early and constant brood-rearing, by feeding up to the time the harvest commences, or until the bees are able to find honey enough in the fields to enable them to keep up a large supply of brood.

Some have claimed that spring feeding, by deceiving the bees into the belief that honey could be found in the fields, induced them to fly out when the weather was unsuitable and thus to perish, materially weakening the colony instead of increasing its population. Such may often be the result if they have access during the daytime to honey or any liquid sweets placed in feeders, but if combs containing sealed honey are placed in the hive and a small portion is uncapped just at nightfall, or if the feeders are supplied only at dusk, and no more food given than the bees can remove during the night, no such result need be feared. This plan avoids danger of robbing.

The writer recommended these methods last spring, and a recent examination of a large number of colonies of bees in various apiaries adds more testimony in favor of them. These stocks that have been fed regularly during the recent unfavorable weather are now strong in numbers and are profiting by the present harvest, while others that have received no attention and that barely had honey enough to carry them through are not as strong or no better off than two months ago. Others that had considerable honey but that were not stimulated are not in good condition now.

The sole care of the apiarist up to the time of the real harvest should be to rear as much brood as possible in every hive. To this end the combs should be so arranged as to give regular worker cells near the center of the hive, the hive should be tightly closed above and the entrance made small so as to retain the heat, and the bees should be stimulated by a frequent supply of food. This idea that only strong colonies of bees are profitable cannot be too thoroughly impressed upon the minds of novices.

Frank Benton.

For the American Bee Journal.

Foul Brood.

Bees came out in the spring mostly weak; they commenced gathering about March 10, and continued until April 22. We had some heavy rains and honey failed; they again commenced gathering May 1. I have increased about 50 per cent. I have some strong colonies that have gathered from March 10 to April 22, about 50 lbs. of honey each.

I have had 85 colonies with foul brood in the last 12 months. I have lost but 6. I have cured 60, and I am now working with the balance. The way I do is to take out the queen, spray the combs and bees with salicylic acid and borax without uncapping. (This is Mr. C. F. Muth's remedy of Cincinnati, O.) Then in about 5 days after I give them a queen cell or let them raise a queen. I try to have a laying queen in the hive before 21 days. In 21 days from the time I took out the queen, I go back to the hive and uncap all of the foul brood cells, and spray the combs and bees with the remedy. It is best to extract the honey, then spray the combs and bees, for I had three cases to return, but those were very bad cases. By spraying the combs and bees when I take out the queen, I have but very few cells of foul brood that has not been cleaned out at the end of 21 days.

The way I prepare the remedy is to take 128 grains of salicylic acid and 128 grains of borax, and put it in a bottle and add 2 ounces of rain water and ½ ounce of alcohol; then shake it up well, let it stand about one-quarter of an hour, then add 14 ounces more of rain water, and shake well again.

Waterloo, La. L. Lindsly, Jr.

[The best way to apply this remedy is by using an atomizer, which sends a very fine spray over the comb and bees. Such is illustrated on page 212, and can be obtained at this office.—Ed.]

Our Letter Box.

Borodino, N. Y., June 11, 1878.

"I have been obliged to feed 1,500 lbs. of honey and sugar syrup, to keep my bees from starving, and I fear the end is not yet. Rain, with high winds and frost every few nights being the cause."

G. M. DOOLITTLE.

Augusta, Maine, June 12, 1878.

"The weather is cool, and prospects are poor for honey crop. I fear white clover will not yield much honey, though it may be too early to tell how it will come out yet. God speed the AMERICAN BEE JOURNAL."

ISAAC F. PLUMMER.

Hastings, Minn., June 7, 1878.

"Sickness last summer prevented me from attending to my bees, and I sold off nearly all, last fall. I have now built up the remainder to over 50 colonies, and hope, health permitting, to have a good report of this season if Mr. Perrine's 2000 colonies do not come up the river and appropriate all our bee pasturage. We wait patiently for his report. It is a great undertaking."

WM. DYER.

Carson City, Mich, June 13, 1878.

"In this part of Michigan, fruit is all destroyed, crops of all kinds are badly damaged, and worse than all, it is freezing about 2 nights in each week. We had 3 fine days early in this month, during which time our strongest colonies of bees stored 40 lbs. of honey, in sections; comb was furnished to nearly all of them. Since then it has been so cold that they have quartered down below. Honey was gathered from the red raspberries." HIRAM ROOP.

Crystal Springs, Miss., June 6, 1878.

"I have about 50 colonies, probably about one-half in tolerable condition. Fully three-fourths are pretty Italians. They built up and gathered rapidly during fruit-bloom; and with but few exceptions, they ceased to raise brood immediately after that, and dwindled considerably. But for the past 10 days they have been gathering well. Some are averaging 10 to 20 lbs. per week of extracted honey, and some are storing in boxes."

JESSE R. JONES, M. D.

Oquawka, Ill., June 14 1878.

"I noticed a slight mistake as to date of our last meeting, it should read October 2nd and 3rd, instead of October 12, as printed. Please correct in the next number of the JOURNAL.

Bees are doing finely in spite of the almost continuous rainy weather; some new swarms, and they are building new comb. Could we but have fair weather, things would go ahead with a *rush*. Bees are working this morning with a tremendous power.

I can nail together 1000 Prize Sections in 10 hours work, with my spring section mold. Who can beat it?" WILL M. KELLOGG.

Eugene, Ind., June 10, 1878.

"The honey season is backward here this spring. We have had a cold rain for the last two days. Unless the colonies were strong they have not done much more than just gather the honey as fast as they eat it. There have been but few swarms here, so far." H. H. HARTFORD.

Des Moines, Iowa, June 11, 1878.

"One good swarm April 25th, and 8 more before the middle of May, all from 7 colonies, and fed from last year's stores, wintered over with the bees in the hives.—Have not fed over 10 lbs. of sugar since Nov. 1st, and that wholly for experimenting. Shall feed for a few days now, as the flowers seem to secrete no honey."

J. M. SHUCK.

Wethersfield, Conn., June 19, 1878.

"Clover is at its best—yet the weather for the past 10 days has been bad—cold, cloudy or stormy almost all the time; still, as a whole, my bees have done well up to this date. As usual, some are doing little or nothing; others extraordinarily well. I have had no swarms yet, and do not want any. My neighbors have, especially one particularly smart one, who has had 3 from one hive, and gives this to show that his bees are managed better than others. Oh, yes, he is *very* smart, but if I can make mine stay at home and attend to business *I* shall be satisfied." F. J. SAGE.

Vermont, Ill., June 14, 1878.

"On account of failing health, I have sold most of my bees (Italians and Hybrids), and will fill no more orders until further notice, keeping only a few colonies of my Cyprian bees to employ my leisure time. Having been stung considerably during the past year, I am advised by physicians that my constitution will not endure so much poison, and am compelled to abandon bee-keeping on a large scale. I have handled bees for the past 10 years, buying my first colony of bees at the age of 9 years, of Mr. Abe Arthur, of Good Hope, Ill, now near Scottsburg, in the year 1868. During the last 2 years I have given value received and made all losses satisfactory. Thanking all for their patronage, I wish them success in bee-culture. HARDIN HAINES.

Mt. Gilead, O., June 3, 1878.

"I took the BEE JOURNAL for several years, but last year I felt too poor to take it—but I believe I am poorer now than I would have been if I had continued to take it, so I renew again, and think I can get up a club here. Since April, bees have done poorly. May was a poor month for them.—I wintered 30 colonies on their summer stands without loss. During April, while the peach and cherry bloom lasted, they gathered honey and pollen fast, and increased rapidly. In May they destroyed their drones and some of the worker brood. They are not as strong now as they were on May 1st. They are doing well now on white clover. Many bees in this vicinity starved. I am impatient to get the JOURNAL to learn how they have done in other localities." JOSEPH TRUAX.

Rome, Ga., May 15, 1878.

"The Italian bees commenced to swarm on March 15, and swarmed rapidly up to April 25. Black bees commenced to swarm in this section, April 12, almost a month's difference. Some swarms have cast 2 swarms, and have already given over 40 lbs. of fine honey. This spring has been an exceedingly fine one.

"The honey season opened finely, and during March and April was good. Since then we have had only a medium supply for the bees; this enabled them to breed rapidly and swarm tolerably well. The prospect now for the South is rather poor for a large crop. Those having good honey for sale, may rest assured of obtaining a good price." A. F. Moon.

Embarrass, Wis., June 4, 1878.

"I packed 5 hives in a box, with chaff 1 ft. thick all around and over, with an entry 11x3x1 ft. in front. The rest in my extra-dry room in the cellar. The result was, my bees all came out strong, and not a quart of dead ones on the cellar bottom. Those out of doors lost scarcely any, and were very strong. I had swarms April 29, May 1, 7, 13, and 24. The earliest I ever had them before was June 22. Chaff packing *this time* is far ahead. No swarms yet, from those wintered in cellar. I think I should have had, were it not for the killing frost of May 13. Colonies wintered out of doors have killed drones. Those wintered in the cellar have not. They must swarm soon, I think. White clover has commenced blooming a little." J. E. Breed.

Garrettsville, Ohio, June 10, 1878.

"Like many others, I have to complain of unfavorable weather for our pets—the bees. Spring opened very fine and brood-rearing was far in advance of the usual season. Then followed 20 consecutive days, with more or less rainfall, followed by frosts and cool weather. Swarms, that were apparently about to issue, killed their drones and did but little more than consume their stores. White clover appeared May 24th, and since that date they have been permitted to work about two-thirds of the time. I have nearly 40 colonies, and the best of them are now storing surplus, the others nearly full, but not in the boxes yet. White clover is more than usually abundant in this vicinity, but, so far, it has not afforded much honey. Raspberries are plenty, and have had their almost undivided attention, but they were much injured by frosts." Warren Pierce.

Strait's Corners, N. Y., June 10, 1878.

"Thanks for the Emerson Binder and your pamphlet on "Honey as Food and Medicine." It is just what the people should read. It contains so much valuable information that I shall distribute them largely next season. I wintered 24 colonies in the cellar; chaff cushion on top, and hive raised ¼ inch from the bottom board. I gave them a fly, March 8th, and set them back at night. April 15th, I put them on summer stands, all in good order, except 2 weak ones, which I lost in springing. I wintered 4 out of doors, in a large box, packed in chaff, with upward ventilation, and allowed them to fly at will. These are very strong. I had large swarms issue June 2nd, and June 5th. Apple bloom was destroyed by frosts; white clover is just coming in bloom. We had hard frosts on the nights of the 5th and 6th inst. I hope the weather will warm up now; if it does not, the honey crop will be light in this section. Upon May 15th, I saw about 30 bees waltzing about on the alighting board; upon examination, I found a young queen dead. I suppose the cause of her death was that a preparation to swarm had been made, and the bad weather at that time preventing the swarming, caused her to be killed.—Success to the Journal." Isaac E. Pelham.

Fayette, Miss., June 11, 1878.

Editor American Bee Journal:—"I send you a bunch of flowers and leaf from a tree in this place. Would like to know what it is, and its origin, whether trees could be produced from the seed, or cuttings of the tree. Some call it the "Varnish tree;" and the only one in this part of the country is now about 1½ feet in diameter, tall and bushy, limbs lengthy and drooping. It blooms twice a year, spring and fall; and is now one mass of flowers, in bunches, (as per sample), at the end of each sprig or limb. The body of the tree is dull green, very smooth and glossy. The leaf sent is not quite full grown, the tree holds bloom a long time, and its odor is something like the night-blooming jessamine. The bees are swarming on the flowers from daylight till dark; not only honey bees, but every kind of bee, wasp, yellow jacket, ants and numerous insects that love sweets. Do you think it produces abundant honey? It must do so, from the fact that every bee and insect seems so fond of it. The tree is perfectly beautiful." G. W. McMurchy.

[Prof. Beal kinkly gives me the following information: "It is *sterculia plantanifolia*. It comes from Japan. Perhaps it does not produce good seeds in the Southern States. If it does, the seeds will grow."—The plant is closely related to the mallows.—A. J. Cook.]

Woodville, Miss., May 18, 1878.

Dear Friend:—Many thanks for your pamphlet on Honey. I'll warrant that no one appreciates it more than I do. I know it is too late for the book, but you can put the following into the Journal:

Cough Candy:—Boil a large double handful of green hoarhound in 2 qts. of water, down to 1 qt. Strain, and add to the tea 1 cup of honey, 1 cup sugar and a tablespoonful each of lard and tar. Boil down to a candy, but not of the brittle kind. It is the very best cough mixture I know of.—Begin with a piece the size of a pea and go up to as large as needful.

Honey Cough Candy.—It is made entirely of honey, but thick with walnut kernels. The dose is considerably larger, being quite as large as a pecan. Neither should be boiled to the point of brittleness, to better regulate the size of the dose

On March 25th, I noticed, while inspecting a hive, some *two or three* bees evidently hostile to the queen. I picked them out and killed them and hoped all the rest were loyal, seeing nothing else to the contrary; but the next morning, lo! there at the door was the queen *dead*. I cannot tell you how it distressed me. It was only about midday, and I could not think what either myself or the poor queen had done to anger the bees.

The colony that was trying to swarm the middle of the month made it out, I think, though I did not see them, but on the 25th I saw a young queen in that hive which had just emerged from her cell. I suppose I must have overlooked that cell when I cut out the rest. I forgot to notice when I saw the first drones, but there are lots now in some of the hives. The honey coming in now is delicious. ANNA SAUNDERS.

Clyde, Iowa, June 13, 1878.

"In answer to many questions—'What killed the bees?' I will say: Improper stores. During the winters of 1877-8, I lost 75 per cent.—cause, poor honey. A large proportion of those lost were blacks, while a large per cent. of those left was Italians. Does this not prove that the latter are more hardy, and that they procure better stores? They are more gentle, and for this reason alone I prefer them to the blacks."

R. ECKLESS.

Elizabethtown, Ind., June 15, 1878.

FRIEND NEWMAN:—"I see by last month's JOURNAL that you report 'universal cold and wet.' With us, it has been so; even now, June 15, we are having very cool nights, for this time of the year; and to make matters worse, it rains almost every day. White clover has been in bloom for several weeks, and has furnished but little honey. Bees are in nice condition, however, to work in boxes, if it only turns warm and dry. As the queens have had things all their own way, filling the combs full of brood from top to bottom, and bees are strong in numbers, they will have to store in boxes if there is any honey to gather." JOSEPH M. BROOKS.

Sherwood, Wis., June 7, 1878.

"EDITOR JOURNAL:—I send you a small twig from a willow covered with aphides, or lice. I also enclose some of the leaves with the 'honey dew' adhering thereto.—From close observation made by Mr. W. R. Bishop where these parasites were congregated in large numbers, we are satisfied that Mr. Chas. Sonne is correct in his assertions on 'honey dew,' in the June number of the AMERICAN BEE JOURNAL. When they were disturbed, the liquid could be plainly seen ejected by them, and with sufficient force to be distinctly felt upon the hand. The upper side of the leaves were completely covered with 'honey dew,' and the bees had been working quite vigorously upon them. We thought we would send you some of the genuine article for examination, if you should desire to do so and report." L. POTTER.

[Thanks, friend Potter, for the samples. They prove, pretty conclusively, that you are correct.—ED.]

LaPorte City, Iowa, May 16, 1878.

"Bees wintered well, consuming but little honey. They commenced breeding very early. On Sunday, April 28, I had a large Italian swarm. The Sunday following, a second swarm, and I don't know how many more would have issued if I had not removed the queens and cells. This is a good proof that the Italians are ahead of the blacks. Bee-keepers of Iowa, now let us hear who got the first swarm, and whether it was a black or an Italian swarm. I think that not more than 5 per cent. of all that were wintered in cellars have died.—With splendid prospects, bee-keepers are happy. May the JOURNAL ever prosper, and help the bee-keepers to solve the many mysteries yet hidden." L. L. TRIEM.

Great Bend, Pa., June 24, 1878.

"DEAR EDITOR:—Your very kind letter is received. We are happy to report favorably of the foundation machine you sent us. We have made a batch of very nice comb foundation. We made some wooden dipping plates, and like them much better than the metal ones. We use nothing but water and have no trouble about the wax sticking to the plates. We think we shall be more pleased with the machine as we become accustomed to its use. Our bees are doing nicely and drawing out the foundation in a beautiful shape. We are extracting some very nice honey." SQUIRES BROS.

Boone Co., N. Y., June 7, 1878.

"I am much pleased with the BEE JOURNAL. Many thanks for its enlarged size.—It is the largest and best bee paper published in the world. I never had any of those remarkably large yields of honey, &c., to report, that some do. My bees are doing as well as I can expect. The weather is very cold and summer backward. I should be much pleased if we could have a correct likeness, in the JOURNAL, of T. G. Newman & Son. I think it would give much satisfaction. It seems to be natural, when we read the JOURNAL to want to know how the Editors look."

D. L. FRANKLIN.

[Thanks, friend Franklin, for your good words and wishes. Our aim is to make the JOURNAL impartial as well as impersonal, and fear it would be considered by some rather pretentious for us to parade our *physical* appearance in it. It is the mind that makes the *man*, you know.—ED.]

O'Fallon, Ill., May 13, 1878.

"FRIEND NEWMAN:—You abridged my article in the May No. so much that any one would think I had only 23 Adair hives, all told, when I really have 65. The brood I spoke of was in Langstroth frames. I had a big swarm on April 30th, with 15 queen cells started in the old hive. I have had none since; it has been so cold, with occasional frosts, ever since."

C. T. SMITH.

[We are sorry if by abreviating we conveyed a wrong idea, friend Smith, and cheerfully correct it. With all our enlarged space in the JOURNAL, nearly doubling its capacity, we are often too crowded, and have either to abreviate or omit entirely, especially during the months from November to June. We spend a good deal of labor to make the best of all matter sent in by our many friends, and it is not often that they have cause to complain, but we suppose it was an oversight in copying the article. But we know friend Smith will excuse us. We hope all our friends, who write for the JOURNAL, will act on the advice of friend Palmer in the April No., page 123,—to boil down their ideas as much as possible, and thus give *all* a chance to be heard. It should be remembered that the JOURNAL has now nearly twice as many readers as it had a year ago, and they all like to have their letters printed. So let all condense as much as possible, or we shall be obliged to enlarge again.—ED.]

Waterloo, Ky., June 14, 1878.

"Bees are doing well here, making large quantities of honey. The white clover is the largest crop that I ever saw in this county; we have had plenty of rain to keep it good for a month longer. I am well pleased with the JOURNAL. I could not well get along without it." R. L. AYLOR.

☞ The issue for 1878 of the *Newspaper Directory and Advertisers' Hand-book*, published by the world-known advertising agency of S. M. Pettengill & Co., 37 Park Row, New York, has just come to hand. For simplicity and convenience of arrangement, comprehensiveness of scope and general accuracy, we have long regarded this as by far the best and most reliable Newspaper directory published in the United States or elsewhere. It contains a complete list of the pewspapers published in the United States and the British Provinces, a second list arranged, for the convenience of advertisers, in counties; lists of the daily, weekly, monthly, religious, agricultural and specialist newspapers and periodicals, with full information as to character, circulation and proprietorship, and a list of the leading newspapers of Great Britain, Australasia and Europe. The volume is illustrated with portraits of Bayard Taylor, Geo. W. Childs and Brete Harte among living, and Samuel Bowles, James Gordon Bennett, of the dead journalists of the United States, while an excellent steel engraving of Mr. S. M. Pettengill appears as the frontispiece. An intesesting article on advertising, replete with hints drawn from long practicol experience of the subject, should make this volume specially attractive to enterprising business men.

PLANED PRIZE BOXES.—We have just made arrangements to cut out, ready to nail, Prize Boxes that are planed on the outsides. These we can box and deliver on board the cars for $8 per thousand. Those not planed we shall still sell for $7, as heretofore.

Business Matters.

TERMS OF SUBSCRIPTION.

Single subscription, one year	$2 00
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Three " " " "	5 00
Four or more, " " "	each, 1 50

Advertisements will be inserted at the rate of **20 cents** per line of Agate type, each insertion, cash in advance. One inch measures fourteen lines.

Notice to Advertisers.—We intend only to advertise for reliable dealers, who expect to fulfill all their advertised promises. Cases of *real* imposition will be exposed, and such advertisements discontinued. No advertisement received for less than $1.

Address all communications and remittances to

THOMAS G. NEWMAN & SON,
974 West Madison St. CHICAGO, ILL.

ADVERTISING RATES.—The *Bee-Keepers' Magazine* charges 50c. per line, and *Gleanings* 30c. per line; but the AMERICAN BEE JOURNAL, acknowledged by all to be the best advertising medium in the world for bee-keepers, charges only 20c. per line. Having doubled the number of our readers this year, we shall not continue our old rates where the advertisement goes in more than once—but will hereafter charge 20 cents per line for each insertion. All will please to "take due notice and govern themselves accordingly."

TO CORRESPONDENTS.

When changing a post-office address, mention the *old* address as well as the new one.

We send the JOURNAL until an order for discontinuance is received and all arrearages are paid.

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In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additions can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us four subscribers to THE AMERICAN BEE JOURNAL with $8.00. Premium Queens will in every case be tested, but not sent till after July 1st.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce, Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Prof. Cook's New Work.

Within 20 days after this work was issued from the press, 600 copies were disposed of —a sale unprecedented in bee literature.—We subjoin a few of the many notices the Press has been pleased to give it:

MANUAL OF THE APIARY, by A. J Cook, Professor of Entomology in the Michigan State Agricultural College. Second edition, revised, enlarged, mostly re-written, and copiously illustrated. Published by T. G. Newman & Son, Chicago, Ill. Among the numerous works on apiculture, we know of none so valuable to every practical apiarist as this handsome volume of 286 pages.—Every point connected with the subject on which it treats, is handled in a clear, exhaustive, yet pithy and entirely practical manner. As we consider the work well worthy of a more extended notice in a later issue, we shall merely remark here that it should be in the hands of every apiarist who is seeking success by availing himself of the latest and best information on his business.—*Rural New Yorker.*

It contains upward of 300 pages, has over 200 illustrations, and is the most thorough work on the apiary ever published. It is the only book which illustrates the various bee plants.—*Lansing* (Mich.) *Republican.*

We are in possession of a copy of the "Manual of the Apiary," by Prof. A. J. Cook, of the Michigan Agricultural College, and it is a work of such rare merit that we want to tell our bee-keeping friends something about it. Prof. Cook is an entomologist, a botanist, a ready writer, a passionate lover of the honey bee, and his new work savors of all these qualities which are essential to the writing of such a treatise on bee-culture as the public demands. We experienced great pleasure in reading the invaluable works of Quinby, Langstroth, and King of our own country, but since these works were published, new discoveries have come to light, new methods have come into practice, valuable inventions have been made, and they fail to meet the present wants of the successful apiarist.—This new manual, however, fills these wants and will be prized by the friends of the bee—not only the practical bee-keeper, but its contents are such as to be read with pleasure by every one in any way interested in the little honey-gatherer. The anatomy and physiology of the bee, its wonderful habits and peculiarities, are fully described; descriptions of new utensils and modern methods of managing the apiary are given, and a more complete statement regarding honey plants is made than was ever before given by any writer. The illustrations are numerous and well executed, the type is clear, the paper is of good texture, and the binding is well done, all of which reflects much credit on the publishers, Thomas G. Newman & Son, Chicago, Ill., who are the publishers of the AMERICAN BEE JOURNAL. No person can afford to keep bees without a copy, which will be mailed by the publishers on receipt of $1.25 for cloth, and $1.00 for paper covers.—*Daily Standard*, New Bedford, Mass.

After some preliminary remarks of a general character, the first subject treated is the natural history of the honey bee, including its varieties, its anatomy and physiology, and the origin and function of its products—with 28 elegant engravings. Then follows the care and management of the apiary, covering its location, structure of hives, boxes and frames, the transference of swarms, feeding and feeders, queen rearing, increase of colonies, Italianizing, honey extracting, bee-handling, marketing honey, honey plants, wintering bees, &c., &c.—with 82 engravings. A careful and minute index affords easy reference to any point on which information may be desired.

The whole constitutes the latest, as it is also in many respects the fullest, most practical, and most satisfactory treatise on the subject now before the public, and we do not doubt it will meet with a large sale.—*Country Gentleman.*

Thomas G. Newan & Son, publishers of the AMERICAN BEE JOURNAL, in this city, have issued a new and enlarged edition of the "Manual of the Apiary," by A. J. Cook, Professor of Entomology in the Michigan State Agricultural College. The first edition was given to the public less than two years ago, and soon achieved an unexpected popularity. With this encouragement the author was induced to largely re-write and revise the work before issuing a second edition. Taking up first, the natural history of the honey bee, he discusses its entomological characteristics, its anatomy and physiology, its natural methods of increase, and its products. Part II. is devoted to the care and management of domesticated bees. Individual experiences and apiarian writers have been laid under contribution to furnish suggestions and intelligence, and eminent apiarists and scientific journalists have expressed their approval of the book. The present edition contains the latest developments of science and the most recent improvements connected with bee-culture and honey-production, and is copiously illustrated.—*Chicago Evening Journal.*

A second edition of at least 2,000 copies, added to the first edition of 3,000 copies, means that there is an active demand for this manual by the apiarists of the country. We cannot help thinking that this is the most complete and practical treatise on the culture in Europe or America. Its 110 beautiful illustrations could not have cost, in engraving, less than $400, and its attractive letter-press and general make-up will win lots of friends for the art upon which it so graphically treats. There are 20 chapters, besides an introduction. The introduction is lively and shows who may keep bees, the inducement to bee-keeping, its recreation and profit, its adaptation to women, its delicious food for both mind and body.

Part I., Chapter I., treats on the natural history of the honey bee, its place in the animal kingdom, the class and order, entomological, the family genus and species of the queen bee, the varieties—such as the German, the Italian, etc. Then, in Chapter II., we have the anatomy and physiology, the organs, the transformations, the three kinds of bees in each colony, as the queen, the drone and the neuters or workers.

Chapter III. treats of swarming, or increase, and Chapter IV. of the product of bees, as honey, wax and pollen or bee bread.

In Part II. we come to the practical work of the apiary, its care and management, the hives and boxes, the position and arrangement, how to transfer bees, how to feed them and how much to feed, queen rearing, how to handle bees, how to market honey, the best honey plants—as April plants, May plants, June and July plants, wintering bees, the enemies of bees, and work for each calendar month. The arrangement is successive, and every topic is lucidly treated in the Professor's blithesome, light-hearted, pithy, suggestive style. The complete, elaborate index is not the least important and valuable part of the book. The author will send this popular bee book in cloth to any one who will remit him $1.25; in paper for $1, postpaid. This book, and we like it all the better for it, is a Michigan product. The author was a Shiawassee county boy, a graduate and now a professor of the Agricultural College; and this book, wherever it goes, at home or abroad, will not disgrace the State, the College, or the author.—*Post and Tribune*, Detroit, Mich.

This handsome little volume of Professor Cook has met with large favor from the lovers of apiarian studies. The first edition of 3,000 copies, published two years ago, has been exhausted, and a general wish and want has induced a careful revision of the book, with many additions and illustrations. It is both a practical and scientific discussion, and nothing that could interest the bee-raiser is left unsaid. It is a book of 286 pages, well illustrated, and very neatly printed on clear white paper.—*Chicago Daily Inter-Ocean.*

MANUAL OF THE APIARY.—The large class of apiarists in the United States will find much valuable information in this work, from the pen of Prof. A. J. Cook, Professor of Entomology in the Michigan State Agricultural College. It is not necessary here to go over the ground of the volume's contents, for they are already well and favorably known by bee culturists. This is the second edition. When it is stated that more than 2,000 copies of the first edition of 3,000 were sold in one year, the popularity of the book may be readily understood without further comment. But at the same time it is *apropos* to state that the present edition is greatly enlarged, mostly re-written, even more fully illustrated, and contains the latest scientific discoveries of the most recent improvements in methods of apiarian management and bee-keeping apparatus. The writer says he recommends nothing that he has not proved valuable by actual trial unless he gives some eminent person for authority for advising it. The volume is published by Thomas G. Newman & Son, publishers of the AMERICAN BEE JOURNAL, No. 974 West Madison Street, Chicago. —*Prairie Farmer*, Chicago.

MANUAL OF THE APIARY, by Prof. A. J. Cook, revised, enlarged, mostly re-written and illustrated, has been issued from the press of Thos. G. Newman & Son, of the AMERICAN BEE JOURNAL, Chicago. It needs no recommendation, for it recommends itself.—*Western Rural*, Chicago.

Bingham's Smoker Corner

Will contain a short card from some one every month. See Bellows Smoker card on another page.
T. F. BINGHAM.

Lincoln, Mo., June 9, 1878.

"Our bees commenced swarming in May, and still continue. We have divided some. We now have 92 colonies. Bingham's Smoker came to hand last Saturday. We are all well pleased with it. We can now send the smoke where we want to, if the wind is blowing. Sometimes we found it very difficult to direct the smoke in the entrance of a hive with a rag smoker, but Bingham's Smoker cures that fault, and we are happy. Our eyes are no longer red from smoke. Thanks to you and the ingenious inventor."
Yours, MRS. J. W. DICK.

Clockville, N. Y., June 11, 1878.

"Received smoker all right. I cannot praise it enough; it is all the inventor claims for it, and twice as much, It works better than the Quinby or any other smoker that I have seen, and I would not trade it for two common smokers. It is a first-class instrument. W. V. BOSWORTH, JR.

Logansport, Ind., May 30, 1878.

"The Bingham smoker came to hand in due time, but out of shape from rough handling in the mail bags, but was easily righted up. It is all I expected, and more. I do not see how I did without it so long. I have no hesitation in recommending it to all bee-keepers." M. MAHIN.

Kenton, Tenn., June 11, 1878.

"The Bingham Smoker came to hand all right, and I have given it a fair trial. It is far better than the Quinby, which I have been using. It will remain trimmed and ready for use much longer than the Quinby—the Quinby goes out quickly. It is more durable, and I think I will send you some more orders for it soon." J. W. HOWELL.

Elizabethtown, Ind., June 15, 1878.

"I have just purchased a smoker (one of Bingham's extra large size), and to say that I am pleased with it does not half tell it. There may be other makes and styles as good, but I can't see how they could be *better*. To start the thing, put a few coals of fire in the tube, sprinkle on a little dry sawdust, then chips, and fill up with anything lying about loose. Talk about smoke! It could almost smoke out a whole camp-meeting. But the best thing about it is, that it does not go out, like the old style Quinby Smoker. I have often laid this one down on its side, while eating dinner (about an hour), and when ready to commence work again, it is ready for business. My advice to those about to buy a smoker is, to get the largest size; it costs more, to be sure, but it will give you satisfaction every time. You can throw away your bee-veils, or keep them for your visitors. *You* will not need them, as you need have no fears of stings, even from the crossest hybrids." JOS. M. BROOKS.

Prof. Cook, in his new "Manual of the Apiary," speaking of the Bingham Smoker, says;

"This smoker not only meets all the requirements, which are wanting in the old Quinby smoker, but shows by its whole construction, that it has not only as a whole, but in every part, been subject to the severest test, and the closest thought and study.

"At first sight this seems an improved copy of Mr. Quinby's smoker, and so I first thought, though I only saw it in Mr. Bingham's hand at a Convention. I have since used it, examined it in every part, and have to say that it is not a Quinby smoker. The bellows, the valve, the cut-off, and even the form are all peculiar The special point to be commended, and I suppose, the only one patentable, is the cut-off between the bellows and fire-tube. so that the fire seldom goes out, while even hard-wood, as suggested by the inventor, forms an excellent and ever-ready fuel. The valve for the entrance of air to the bellows, permits rapid work, the spring is of the best clock-spring material, the leather perfect, not split sheepskin, while the whole construction of the bellows, and the plan of the fire-screen and cut-off draft, show much thought and ingenuity. I am thus full in this description, that I may not only benefit my readers, all of whom will want a smoker, but also out of gratitude to Mr. Bingham, who has conferred such a benefit on American apiarists. There are three sizes, which may be bought for $1.25, $1.60 and $2.00, respectively, including postage.

"Mr. Bingham, to protect himself, and preserve the quality of his invention, has procured a patent. This, providing he has only patented his own invention, is certainly his right, which I think honesty requires us all to respect. Like Mr. Langstroth, he has given us a valuable instrument; unlike Mr. Langstroth, he should be granted a reward for his gift."

New Quinby Smoker Column.

It is but just to call the attention of bee-keepers to the fact that those who compare the Quinby with the Bingham Smoker, refer to the last year's Smoker, and not the better one I am selling the present season.
L. C. ROOT.

Lansing, Mich., June 6, 1878.
I have now tried the New Quinby Smoker, side by side with the Bingham, and see no essential difference in their merits, which is great praise for either one. I wish I could have tried yours before I sent out last proof-sheets of book; I should have said as much as the above in your favor, and will in the revised edition. I congratulate you, and bee-keepers, too, on your advance,
A. J. COOK.

Cherry Valley, N. Y., May 5, 1878.
L. C. ROOT, ESQ.—*Dear Sir:* Your improved Smoker received and tested. I consider it the most complete one in the market. I bought eight of Mr. Bingham last winter, but had you then been manufacturing the perfect Smoker you now offer the public, I should certainly have purchased of you.
J. E. HETHERINGTON.

Borodino, N. Y., May 6, 1878.
I pronounce it decidedly the best *bellows* Smoker made. * * *
G. M. DOOLITTLE.

Starkville, N. Y., May 1, 1878.
In excellence of workmanship and material, it far surpasses any other Smoker I have ever examined.
P. H. ELWOOD.

Canajoharie, N. Y., May, 1878.
We are glad to announce, however, that Mr. L. C. Root has improved his Smoker so much that it is decidedly better than any other Smoker.
J. H. NELLIS.

White Plains, N. Y., June 3, 1878.
I found it better than the Bingham, which up to this time is the best I had seen.
C. J. QUINBY.

East Saginaw, Mich., June 16, 1878.
You have got up a *good Smoker.* It is a little heavy, but I think that is an advantage, as it will stand up better when you are not using it. I am pleased with the way it is made, and it will last for years with almost any kind of use.
O. J. HETHERINGTON.

THE BEST YET.—T. B. Peterson & Brothers, Philadelphia, Pa., are now publishing a new edition of Charles Dickens' novels, which for beauty and cheapness far surpasses any ever before issued. It is called "Petersons' American Edition," printed on fine white paper, from large, clear type, leaded, with some original illustrations as selected by Mr. Dickens and designed by Phiz, Cruikshank, Browne, Maclise and other artists, and bound very gorgeously in red vellum, gold and black, with the cover filled with the author's principal characters, which he has made so world famous. There in one corner is the immortal Pickwick, in another the well known Micawber, the learned Capt. Cuttle, poor little Oliver Twist, the misguided Grandfather, the mean, hypocritical Pecksniff, the mercenary Squeers, Boots, the Beadie, etc., and all of this for the small sum of $1.25. This edition will be found for sale at all book-stores, news stands, and on all railroad trains, or any person sending the publishers $12.00, will receive the first twelve volumes as fast as published, by mail, postage paid, and at this low price every one that is fond of a handsome book ought to subscribe. Address all orders to T. B. Peterson & Brothers, No. 306 Chestnut Street, Philadelphia, Pa.

"MADAME POMPADOUR'S GARTER," is the name of a new, thrilling and historical romance of the reign of Louis the Fifteenth, by Gabrielle De St. Andre, now in press and to be published in a few days by T. B. Peterson & Brothers, Philadelphia. It is a romance of the days of Madame Pompadour, is a story of love, intrigue and facts, and will no doubt prove to be one of the most popular and successful novels that have appeared in print for years, for its pages will be courted and perused by all that are fond of a thoroughly good novel, for its great and absorbing interest. It will be issued in uniform style and price with "Theo," "Kathleen," "Gabrielle," and "Crespigny," published by the same firm.

HENRY GREVILLE'S NEW BOOK, "*Gabrielle; or the House of Maureze,*" is in press and will be published in a few days by T. B. Peterson & Brothers, Philadelphia. It is a story of the time of Louis XIV., full, too, of all the splendor of its court, is well told, being pure, fresh, startling and historically true, and is most beautifully translated from the French of Henry Greville, and will prove a treat to all lovers of an exciting, absorbing and sensational novel. It will be issued in uniform style and price with "Theo," "Kathleen," and "Miss Crespigny," published by the same firm.

THE "BOSS"

BEE-FEEDER,

Feeds at the front entrance, any time in the day, without danger from robbers; feeds much or little as may be desired; does not gum up, but always gives down; feed can be reached by the bees only from the inside of the hive, and the feeder may be used to diminish the entrance, or to close it entirely; convenient and pleasant to use; every hive should have one.

Price 30 cents, by mail.

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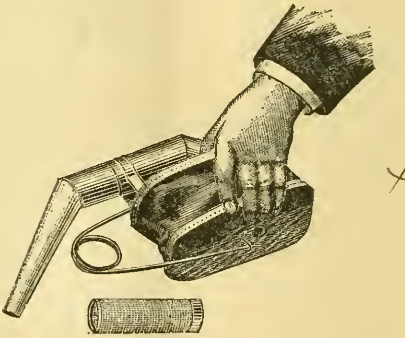

No one who has ever seen this desirable Smoker would consent to use any other.—It works with slow stroke, and will keep ignited for hours.

Price $1.75, or sent by mail or express, prepaid, for $2.00. Address,
LEVI SUTLIFF,
Charles City, Iowa.

BEE-KEEPERS' SUPPLIES.

Sections in the flat, any size, with or without dovetailing, Bee Hives, Brood and Section Frames, Shipping Cases, Queen Cages. Anything in Bee-Keepers' line, made to order. Sample Boxes, 3 cts., by mail.
M. A. BUELL, Union City, Mich.

McMaster's Composition,

For coating honey barrels. It is far superion to beeswax and equal to paraffine for that purpose, and has been thoroughly tested. It costs but 16 cents per lb. to make it. Novice says: "I am surprised that the compound is so free from taste and smell." Sample sent postpaid for 25 cents. After due deliberation I have concluded not to obtain a patent, but make the following liberal offer to bee-keepers: I will furnish the Compound, delivered on cars, at 20c. per lb., on all orders of 25 lbs. or over, or will send postpaid the formula for manufacturing it for $1, accompanied with the following agreement, signed by the person sending the money:

"I hereby pledge my word and sacred honor, that I will not divulge or make known, in any way, shape or manner, the method of manufacturing or the ingredients composing McMaster's Coating Compound.
[*Signed,*] ...."

And after one year's trial, if any person is dissatisfied with results of the Compound, I agree to refund them their money.
M. E. McMASTER,
Palmyra, Mo.
7-tf

THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, AUGUST, 1878. No. 8.

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Editor's Table.

☞ A gallon of honey weighs about 12 lbs.

☞ In one county in California, a hunter is said to have found or located 30 bee trees in a short space of time.

☞ With all its facilities, the bee never takes a honeymoon. The Queen's "bridal tour" lasts but a few minutes! Her spouse is made happy for the *instant*—but the extatic joy is too much for him, for he instantly expires!

☞ No disease is more fatal to bee-keeping interests than that most dreaded of all diseases, foul brood. It does not seem to be confined to any particular locality, but shows its destructive form wherever bees exist, to a greater or less extent, both in Europe and America. Science has failed, as yet, to discover its origin, or a certain and positive remedy. Some experiments are now being made that we hope will throw some light upon it in a scientific way.

MELIPONES.—Few of our readers probably ever heard of an insect by the above name, but the London *Gardener's Chronicle* tells us that the hymenopterous insects known as Melipones, and found in various parts of the world, resemble bees very closely, but are without any sting. Their honey-producing qualities are very decided. Resembling bees in their general character, they are smaller, with a more densely clothed body and the hind feet proportionally longer. As in the honey bees, there are three varieties of individuals—the males, females, and neuters. Some of them make their nests in hollow trees, while others suspend them from the branches. The honey of these insects is said to be of superior quality.

☞ The National Convention of Bee-Keepers will be held in New York City on the 2d Tuesday in October. Let all who can make their arrangements to be present. The editor of the BEE JOURNAL intends to be present. Full arrangements will be published in next JOURNAL.

HONEY KNIVES.—A little more than a year ago Bingham offered to bee-keepers the first and original direct-draft smoker. That has revolutionized smokers; and, strange to say, no one has been able to improve upon it. He now comes to the front brandishing a new and original honey knife, bearing this inscription: "Cast steel, Bingham & Hetherington. Patent applied for." Should these knives prove as original and valuable as the smoker, bee-keepers will recognize their benefactors. These knives come to us under very propitious circumstances. The fact that they are made by two of the most ingenius bee-keepers of Michigan is of itself a guarantee.

Mr. O. J. Hetherington is an extensive bee-keeper, perhaps the largest in the State, and a brother of Capt. E. J. Hetherington, of Cherry Valley, N. Y. Mr. Bingham you all know as the smoker inventor. See advertisement in another column.

☞ In many places basswood is a failure this year, we learn as we go to press. In such places the season cannot be first-class. We hope it has not been general.

☞ The extreme hot weather during last month killed about 200 queens in the cells, just before they were ready to hatch, for friend H. Alley. Others, no doubt, suffered like losses all over the country.

☞ There will be a meeting of the Kansas State Bee-Keepers' Association in Lawrence, Sept. 4th, at 1 o'clock p. m. All bee-keepers are invited, and the editor of the JOURNAL especially. Advantages of reduced fare on railroads to the National Temperance Convention that will be held here at that time, will enable Kansas bee-keepers to attend for one cent per mile.

O. BADDERS, *Sec.* N. CAMERON, *Pres.*

[Thanks for kind invitation. A previous engagement will prevent our attendance at that time.—ED.]

☞ D. D. Palmer advertises glass for honey boxes in this issue. Those wanting such will do well to correspond with him.

☞ Any one desiring to purchase a good apiary, with all its appurtenances, in a first-class location, can obtain valuable information concerning it at this office. The owner desires to retire from the business for the present.

PURITY OF QUEENS.—In demanding that we now settle upon a "standard of purity" for Italian Queens, we inadvertantly stirred up a hornet's nest. In a private letter, a correspondent remarks as follows:

"The queens that are now imported are hybrids. A pure queen has a mark that establishes her purity beyond a doubt. She has three plain and distinct crowns stamped upon her abdomen. That was the kind that Mr. Parsons and others imported in the early day, but they now arrive without crowns and are called by the knowing ones, *pure!*"

There is, then, all the more reason in now deciding upon a standard of purity, "crowning" her Italian Majesty with the *true* emblems of her royal purity!! Let the discussion be exhaustive!

☞ The *Western Agriculturist*, Quincy, Ill., comes to us this month with a handsomely engraved new title page, which, with the other improvements added this year, makes it the Champion Journal for improvements and progress, being the Oldest and Best Established Monthly in the West, well edited and handsomely illustrated. It is a desirable Journal for every Western Farmer. The price is still $1.10.

☞ The Eggleston Truss, which will be found advertised in our columns, presents some features which is well worth the attention of all afflicted with Hernia. This truss is meeting with great success and its manufacturer reports large sales.

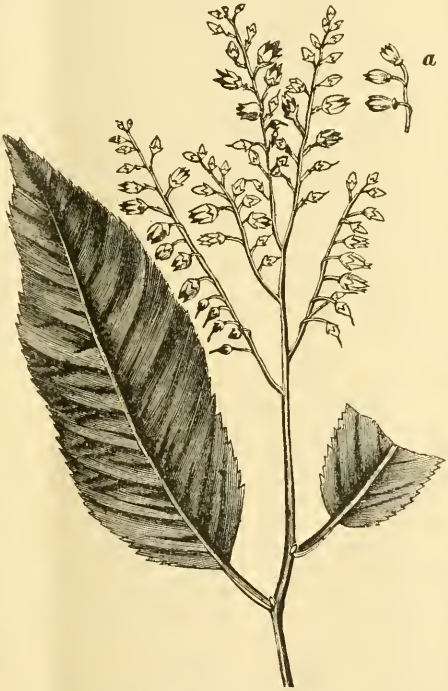
The Sour-wood Tree.

Dear Editor: Being acquainted with "sour-wood" honey, and, after extensive observation, believing it to be the finest honey plant in my knowledge both as to the *quantity of yield*, the *flavor*, and also as to *beauty of appearance*, I would ask if you cannot furnish a cut of the blossom in your Journal?

James W. Shearer.

Liberty Corner, N. J.

The sorrel tree (*Oxydendrum arboreum*), so called because of the acidity of the leaves, is a native of the South, but has been grown even as far north as New York. It often attains no mean dimensions in its native home along the Alleghanies, often reaching upward more than 50 feet, and acquiring a diameter of 12 or 15 inches.



LEAF AND BLOOM OF THE SOUR-WOOD TREE.

The flowers are arranged in racemes, are white, and with the beautiful foliage make an ornamental tree of high rank. The bark is rough, and the wood so soft as to be worthless, either as fuel or for use in the arts. As a honey tree, it is very highly esteemed; in fact, it is the linden of the South.

A. J. Cook.

A Horse Stung by Bees.—We saw, a few days since, a horse that had been most fearfully stung by bees. His head was swollen to an enormous size, large enough for 2 or 3 heads. It was caused by bringing the animal in contact with the current of bees that were passing to and from their work. The animal obstructed their passage, which so enraged the little creatures that they attacked him, and when one stung, others smelt the virus and immediately a light-brigade-charge was made. Too much care cannot be exercised in keeping stock out of the current of workers; otherwise bees seldom attack stock, unless in some way disturbed or angered. Turpentine is a good remedy for the sting.—*Los Angeles Star.*

Ceresin Wax.

EDITOR JOURNAL :—Will you please inform us through the JOURNAL what Ceresin wax is, and its uses ? Should it be used in making comb foundation ?

J. L. JONES.

Ceresin wax is the name of the purified product obtained from ozocerite, an impure fossil wax, found chiefly near the large coal beds of Dwhobriz and Boryslow, in Galicia, and Gresten, in Austria. The crude substance, freed from the sand, clay and other earthly impurities, is of a deep brown color with greenish tint, and has a spec. gr. of 0,940—0,970, exhales a benzine-like odor, and in hardness, fracture and pliability entirely resembles beeswax. It is very combustible, with difficulty solvable in oil of turpentine. It is purified and bleached by means of Nordhausen's sulphuric acid, and in its purest form is used principally as a substitute for beeswax by manufacturers of candles, wax flowers, polishing pomades, cloth finishers, laundrymen, etc.

Considerable quantities have already been imported to this country, and some of our friends have, no doubt, made its acquaintance unknowingly, for it has such a surprising resemblance to beeswax that it is used even for pharmaceutical purposes. We are told that it not only retards, but entirely prevents rancidity in ointments.—The melting proof is higher than the beeswax.

As to its use in the manufacture of comb foundation, there can be no toleration even for the thought. The one who first used it soon abandoned it in disgust, having paid dearly for his folly. Comb foundation should be made of pure beeswax, and that only. Bees usually refuse to accept of ceresin wax, and only when *compelled*, for want of room, will they use it in any case.

We do not believe now that there is any one of our heavy manufacturers of comb foundation that uses anything but the pure wax.

We had an amusing incident a little while ago, on this wise :

A man, living about 500 miles from Chicago, ordered 20 lbs. of comb foundation of us, which we sent in due time. In about 2 weeks, he wrote to us that it was impure—that his bees would not accept it—that they had torn it down and were gnawing it up, &c., &c., and wanted us to send more, of another make, at once. We replied that it was not impure ; but, to satisfy him, we sent 20 lbs. more, of another make, and had him return the first lot. When it came back, we immediately put it into our own hives, to see what our bees would do with it. To subject it to the best test, we gave it to queenless colonies, and in 24 hours they had it built out to half-length cells ; inside of a week it was completely built out and filled with nice, white clover honey.

One piece of that returned, which was doubled up, and out of shape, generally, we partially straightened out, and placed into one of our hives, in the presence of 4 or 5 persons to whom we explained the reason for so doing.—This was, like the rest, accepted *at once*, and is now full of honey ! Several other pieces is now on our desk as it came back from the purchaser, with the cells partly built out—proving conclusively that his bees also accepted it, and had commenced work on it. Evidently they were well pleased with it, and gathering so multitudinously upon it, that being fastened insecurely, it gave way, dropping down to the bottom of the hives. Then in order to get rid of it, he found the bees busy gnawing it to pieces, and carrying it out of their hives. This, we think, is the whole explanation—and though it cost us several dollars to verify our suspicions of the cause, still, we think it money well spent. The one who purchased it blamed both us and the bees wrongfully, but fortunately we are able to vindicate both.

It will not always do to conclude too hastily that foundation is made of impure wax—the trouble is sometimes caused by poor workmanship on the part of the bee-keeper. As before stated, we do not believe any manufacturer of comb foundation is now using anything in it but pure wax.

☞ A correspondent says he has sent money to Tremontani, in Italy, last April, for queens, and gets no answer, and wants to know if that is his way of doing business. So far as our experience goes, *it is.* We sent him money by draft on Paris, in March, and still get no queens from him. We have had to procure them elsewhere, after having paid him for them. We learn from several dealers in imported queens that he has served them in a similar manner this season. He seems to have no conception of how business should be transacted. He will *probably* send the queens when he gets nothing else to think about. We intend to have nothing more to do with him. We learn that A. J. King, P. L. Viallon, and others, have come to the same conclusion. We would not have had the trouble he has caused us this season, for all the queens he could send us in a year. All should be cautious about dealing with him.

A MODEL BEE-KEEPER.—The editor of the Des Arc (Arkansas) *Citizen*, has given us his views of apiculture in that State in the following language, which appeared in his paper on the 9th ult:

"We had the pleasure of looking through Dr. Hipolite's apiary last week, at DeVall's Bluff, and was forced to come to the conclusion that he was the model bee-keeper of Arkansas. Everything connected with his apiary is kept in the neatest order possible, and no man can be more perfectly at home with his bees. We would like to see bee-culture more general in Prairie county, and to that end we suggest that a bee-keepers' association be formed in this county. Prairie is far ahead of the rest of the State in bee-keeping, and should be the first to organize such an association. Let us hear from the bee-keepers of Prairie on this subject."

In 1875 we took a trip down through that State, and noticing the many advantages it presents for the successful management of bees, we wondered why it was so far behind in modern appliances and apicultural progress. By all means let there be an association formed—and let Dr. H. be the *light* thereof.

☞ Friend E. C. Jordan, of Jordan's Springs, Va., is a famous cultivator of vegetables as well as a passionate lover of the bee. He also keeps an excellent hotel at the celebrated White Sulphur Springs, as we notice by the papers in that locality. The "heated season" of the past month makes us wish we *could* accept friend Jordan's generous invitation to us to go and stay awhile at his "cool retreat;" but alas a rush of business that keeps us "red hot" all the time, forbids us from even *thinking* of such "a heavenly rest." Thanks, friend J., for the "cool intent." We must be contented with being "present in spirit" with you, while being "absent in body." Selah.

Dead Letter Office Facts.

We have often referred to the necessity for more care being exercised in addressing letters to this office—particularly in the matter of addressing the letter, stamping it, and in giving very plainly the name of the writer, and the post office address in full. That there is a necessity for this let the following facts demonstrate:

There are 4,000,000 dead letters received yearly at the dead letter office.

Three hundred thousand without stamps.

Fifty thousand, partially addressed.

Six thousand, no address.

Forty thousand dollars in money, nine-tenths of which is returned, the balance remaining in the treasury, subject to application, for four years.

One and a half million of money orders and drafts of money value.

Forty-five thousand packages containing property.

Fifteen thousand photographs.

Quarter of a million of European letters are returned unopened.

One-tenth of all the letters received contain property.

☞ An Iowa exchange says that a farm hand in that State, actuated by curiosity, tipped up a bee hive in order to find out what the bees were doing. He knows now. They were making chain-lightning, and lots of it.

The Bee and the Grasshopper.

A honey-bee, yellow as gold,
Sat perched on a white clover top,
When a grasshopper, wiry and old,
Came along with a skip and a hop.
"Good-morrow!" cried he, "Mrs. Honey-Bee,
You seem to have come to a stop."

"We people that work,"
Said the bee, with a jerk,
"Find a benefit sometimes in stopping;
Only insects like you,
Who have nothing to do,
Can keep up a perpetual hopping."

The grasshopper paused on his way,
And thoughtfully hunched up his knees;
"Why trouble, this sunshiny day,"
Quoth he, "with reflections like these?
I follow the trade for which I was made;
We can't all be wise honey-bees.

"There's a time to be sad,
And a time to be glad;
A time both for working and stopping;
For men to make money,
For you to store honey,
And for me to do nothing but hopping."

Smokers—How to Operate Them.

Please give directions for operating Bee Smokers successfully? Materials to be used and how best to ignite them? X. Y. Z.

In order to do this, we must give directions for operating each kind of smokers, viz:

For Bingham Smoker.—Select maple, or hickory which is sound and dry, and saw it into blocks 4 inches long; split these blocks into pieces ¼ inch square, and keep them in a dry place for use. If it burns too fast, mix some coarser with it. To start a fire with such wood, a few good coals dropped into the bottom before filling with wood will answer; but, as a rule, a few shavings and chips of punk, or rotten wood, started with a match and dropped into the bottom before filling with wood will be found best. Once started with such wood, and refilled occasionally, a fire may be kept continually burning and ready for use. If smoke is wanted only for a few moments, any dry rotten wood will answer, but such as is found in the *heart* of an old *hard wood* tree will be found best.

To Burn Tobacco.—Start the fire as above, and put in a layer of small, square, or broken pieces of rotten wood, then a layer of tobacco, then rotten wood, &c.

For New Quinby Smoker.—Make the smoke of any kind of wood that is sufficiently decayed to burn readily, or if perfectly dry, solid hard wood may be used, split in pieces ¼ inch square, and 5 inches long. To start the smoke, take off the tapering nozzle, light a piece of decayed wood, and put the burning end into the tube first, or drop in a coal of fire, and place the wood upon it. Replace the nozzle; work the bellows with one hand, directing the smoke to the point desired.

For Excelsior Bee Smoker.—Light the smallest end of the cartridge with a match, a cigar, or at the stove, and put the fire end in first; blow a little to get the fire started before you put on the nozzle. Then take it in the left hand, in the middle where it will balance; place the ball of the left thumb in the thumb hole, and hold it down a little sidewise. You can now use your right hand for anything else. When you open a hive, first pry up the board with your knife and give them a little smoke before you let the bees out; this keeps them from taking wing when you open it.

Cotton rags, or cotton filling out of an old, worn out comforter, is the best, cheapest and handiest fuel, as it burns so slow.—Tear or cut the rags up before using.

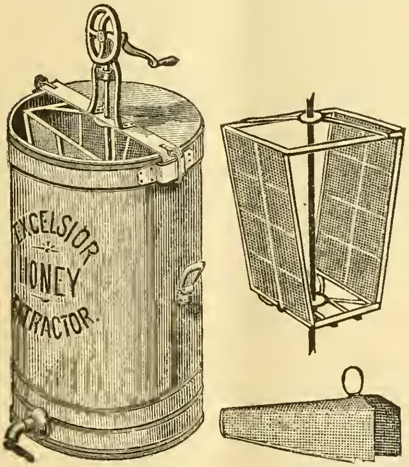
The Season in California.

The San Diego *News*, in speaking of the honey season, says: "Along the coast the season for honey-making is pretty much over, the flowers being nearly closed out. Higher up in the country it is a little different, and in the mountains in some places the season but now fairly opens. In the towns the bees are hard at work on the trees that yield flowers, and on a small yellow shrub that can be found almost anywhere. The honey is very fine, white and pure, and ought to sell for a fine price."

The Los Angeles *Star* remarks:—"We saw in front of Bassett & Co's. a large number of cans filled with honey, ready for shipment. They belonged to E. E. Shattuck, who has 2 bee ranches in this vicinity. We understand that Mr. Shattuck has 20,000 lbs. of honey now ready for shipment. He expects to be able to ship 40,000 lbs. during the season. There are quite a number of apiaries which will yield handsomely. The honey is excellent, but the quantity will be much below the yield of two years ago. This is because many of the bees died during the drouth of last year, and those that are left have not had a good working season. The damp, foggy spring has been a considerable drawback to the bees. But this disadvantage will be partially counteracted by a prolonged season."

The "Excelsior" Honey Extractor.

Here is another candidate for public favor, and one that has many things to commend it. It possesses all the advantages of neatness, durability, and ease of operation, as well as that of thoroughly and quickly emptying the combs of honey! It takes any size frame smaller than 12x20.—It is made entirely of metal, and we think it has advantages that make it the best Honey Extracting Machine in the market. It is light, but has attachments for fastening down to a box or platform, rendering it steady and permanent in position, and is exceedingly easy of operation. It can be instantly taken to pieces for cleaning, having no screws to take out, nor cumbersome and heavy pieces to lift.



Some of its advantages are as follows:

The lower end of the comb basket shaft does *not* revolve in the honey below, even when 60 or 70 lbs. may be there! It has a "strainer," elevated some 3 inches above the bottom of the Extractor, and entirely covering the canal leading to the faucet or honey gate; therefore, when drawn off, the honey is clear and free from bits of comb or other undesirable particles. This "strainer" can be instantly removed, cleaned and replaced.

A strong gearing, with an over-motion, is essential to both *ease* of operation and effective work. By it, the motion can be controlled, so as not to throw out the brood, when extracting. The two covers close the machine up tightly, and thus prevent the bees from annoying the operator, as well as to keep it free from dust, when not in use. The handles are strong, and attached near the centre, for ease of carrying. It is provided with a small comb holder for extracting pieces of comb or partly-filled boxes or sections. The honey receptacle has capacity for 60 or 70 lbs. of honey, where it may be allowed to ripen before drawing off, if desired.

Some of these advantages may be found in other extractors; but none, we think, will put in a claim to them all. The one providing for the revolving of the comb without lubricating in the honey is quite important. For the advantages presented it is exceedingly *cheap*, and it is thoroughly practical. It may be obtained at this office.

Bees in Colorado.

In an exchange, J. S. Flory says: "For years before we came to Colorado we were more or less engaged in the business of keeping bees, both for pleasure and profit. On our arrival here, owing to the long seasons of dry weather to which Colorado is subject, and the absence of honey producing forests, we made up our minds this one pursuit, in which we found so much to admire, would have to be given up. But of late our views upon the subject have become much more modified. We have seen very nice honey in our market for sale, which was gathered by the busy bees here in our midst, and learn from some of your correspondents that others are making the keeping of bees a success. I now look forward with interest and a longing desire to the time when I hope to hear the pleasant hum of swarming bees around my home. As a business of healthful, out-door exercise, and, we may say, recreation from study, we know of no other pursuit so well adapted to both men and women as the keeping of bees. Apiarian science is by no means a dry study. It opens up a field broad and pleasant, and, when mingled in practically, is a thing to be loved and enjoyed. If Colorado 'hath sweets that perish in the desert air,' for the want of willing bees to gather them, let us import and raise an army (that will not be consumers of government rations) that will add more wealth to our resources; workers that will produce for our tables one of the most healthy luxuries known in the world. We have the milk; now if we can have the honey, let us have it that indeed we may have a land like unto ancient Canaan—'flowing with milk and honey.'"

Seasonable Hints—August.

White clover having yielded abundantly in nearly every locality, and basswood being now past its prime, the summer season for storing surplus honey will soon be over, till buckwheat comes in. Between the yield of basswood and buckwheat, if the surplus has been taken largely, it may be necessary to feed some; all should know how their bees are doing, keeping a close watch. All impotent queens should be superseded, so that the colonies may be kept strong to gather the fall crop of honey. Queenless colonies should be given queens or frames of brood, if they have none, in order to raise a queen. If the brood chamber is full of honey, it should be removed from a few of the central frames with the extractor, in order to give the queen room for brood. The opening of hives and the removal of surplus honey should be done at night, in the early morn, or on a cool day.

Surplus honey should be kept in a cool dry place. Examine the boxes and sections occasionally; and if any moth worms are found, remove and destroy them. Extracted honey may be kept in barrels, wooden vats or tins; the barrels or vats should be coated with wax to prevent leakage.

Care should be taken not to expose the honey, to start robbing. The entrance to weak colonies should be contracted, to enable them to defend themselves from robbers.

By the last of August buckwheat will have come in; boxes partly filled should be removed and extracted before that, so as not to have the honey mixed.

During August and September the bees will be more irritable than usual, and all who are nervous or timid should provide themselves with a good smoker and veil, if they find such necessary. These will steady the nerves and enable even the most timid to control their bees at all times, and make the necessary examinations with confidence.

In handling them let the novice be careful to avoid jars, working quietly and steadily, always keeping perfectly cool. Should a sting be given, remove it, squeeze out the poison, and apply honey, soap, hartshorn, essence of peppermint or even a little mud.

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Bee Stings, a cure for Rheumatism.—Our friend Chandler, to whose skill and good taste so many fine engravings have been produced in the Bee Journal and in Cook's New Manual, had been for weeks laid up with rheumatism. Last year we had sold him a colony of Italian bees, and he now has six colonies from that one. A few days ago we saw him get off the street car, opposite our office, and we expressed our supprise at seeing him out, as we knew he had not been able to be at his office for weeks. He informed us that, as the bees were swarming, he managed to hobble out of doors and tried to hive them. Rheumatism preventing any scientific work, he received several stings in his disabled rheumatic arm. It then swelled up; and after caring for the bees he went again to his bed and slept. On awaking, he was surprised to find that the rheumatism had disappeared, and he has not had it since!—He is now a firm believer in bee stings!!

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☞ The increase of the products of the apiary, of late, have caused some to fear a glutted market. Instead of this, the demand is still in advance of the supply. The export of honey to Europe has made the article scarcer at home than it has been for years. It can now be shipped to any part of the world as easily as any other article of commerce. The Shipment of comb honey sent to Bordeaux last season has been satisfactorily disposed of. Thus, at least, we bid fair to turn the tide of gold which flows to Bordeaux from this country in return for the shipments of wine and raisins which they make to us.

◆

☞ A new kind of feed for bees in transit cages has been brought to notice by friend Alley. It works well, the bees living for some two weeks on it while encaged. He is testing it further, and when it has stood the utmost test it will be brought before bee-keepers in a public way. We had a sample cage on our desk, with the bees as lively as one could wish, after being therein 14 days.

SCOVELL'S QUEEN CAGES.—Friend Scovell writes that his cages are just the thing for Introducing Queen Cells as well as Shipping Queens. He gives the following as the *modus operandi:*

> "Trim the cell pretty close, take it by the small end and dip it into melted wax, and put into the bottom of the cage; put the cage, without its lid, bottom up, over an opening between the frames; cover with cloth and the cell is introduced. It can be examined at any time by raising the cloth and picking up the cage."

Friend Scovell says he introduced 25 Queen Cells in that way in one week, without the loss of a single Cell.

SHUCK'S BEE FEEDER.—We have received one of these Feeders for our Museum. It is designed to be used at the entrance of the hive; the entrance can be contracted or wholly closed with it, unless the entrance is too large for it. When the Feeder is in place at the hive entrance, the food, prepared from coffee A or C sugar, by dissolving it in boiling water, may be poured in as often as necessary. As the Feeder fits close to the hive, no bees can reach it from the outside. It is an ingenious contrivance and withal very cheap.

☞ As we must report on the Cyprian queen which was to be sent us from H. Haines, we will say that he has sent us four queens—three came *dead*, and the one that came alive was an Italian. Mr. H. explained that his hired man sent it by mistake. One of those received dead was sent by mail, and two by express. *Experimentum crucis. Je vous remercie.*

THE EVERETT EXTRACTOR.—Friend Everett has sent one of his Extractors for 4 frames to our Museum. It is nicely painted and looks really beautiful. The only criticism we should offer is that the gearing hardly gives power enough for a 4-frame extractor. Friend Everett was the first to get up the small comb holder for extracting honey from small pieces and partly filled sections, and well deserves the credit, for it is a very convenient arrangement.

HONEY AND WAX.—We will take Honey and Wax in exchange for Implements for the Apiary, to any amount, at the usual market prices of both.

A Substantial Basis.

The San Francisco *Bulletin* remarks as follows concerning the cause of last year's failure of the honey crop in California:

> "In several of the past years the yield of honey was so great that the production was far in excess of the requirements of the local markets, which were consequently overstocked. The quantity shipped from the State was wholly inadequate to prevent extremely low prices prevailing at home. This was notably the case at the close of the season before last, when the yield was not short of 3,000,000 pounds. Many apiarists, with a short-sighted eagerness for profit, then drew so largely on the honey in their hives as to leave an inadequate amount remaining for the support of their colonies during the next season, which unfortunately proved a dry one. The loss of bees in consequence during the last season was immense; over 18,000 colonies being destroyed, it is estimated, in Los Angeles county alone."

> The *Bulletin* adds: "The business has now passed that experimental stage in which our industries are too often followed merely for temporary gains and quick profits, and the present efforts to place it upon a substantial basis bid fair to be attended with that permanent success which always inures to perseverance and systematic management."

These "thoughts," first "breathed" by the *Bulletin*, become to every scientific apiarist really "words that burn!" A "substantial basis"—"permanent success!" These are the watchwords—the things to be earnestly sought after, and as the *Bulletin* sagely remarks, "always inures to perseverance and systematic management!"

ENTRANCE REGULATOR. — Friend Albert D. Rust, of Fort Worth, Texas, has sent us one of his Entrance Regulators. It is intended to place it at the entrance of the hive, making it instantly any size desired. It is to be hung just far enough above the entrance to let it swing up, and when turned down just to fit, and must always be adjusted when up. It consists of 2 pieces of zinc with square holes cut in the lower side of each; when by pushing in or drawing out one of them, the holes not being opposite each other are closed or opened at pleasure.

☞ Some time since friend Davis, of Wolf Lake, Ind., sent us drawings of his Queen Dial, and other apiarian appliances used by him in his apiary. He has our thanks. The Dial, particularly, is a useful article.

Marketing Honey.

This department will be devoted to items of interest concerning Packing, Selling and Shipping Honey and Beeswax.

Marketing Honey.

The best method of marketing honey, both comb and extracted, is to sell direct to the consumer or retail dealer, and not to send to honey dealers. One of our correspondents gives his experience in selling honey as follows:

"Last year I put half a barrel of extracted and about 50 pounds of comb honey into my spring wagon, and went among the consumers and sold to them at 12½ to 15 cts. per pound for extracted, and 25 cts. for comb honey; and in a short time I sold all my extracted honey, and could have sold as much more. Those who got but a few pounds of me last season now want more and in larger quantities. I do not think I can half supply the demand I have created in this locality. Last season I sold 4,000 lbs. of honey, but that will not suffice for this season."

If the producer would take a little time and trouble to furnish the consumer with genuine honey at a moderate price, and thus get a market established, he would be surprised at the amount he could sell. Try it. Last season we commenced to sell honey from our office, and now the call for it is vastly increased. So far we have not been able to get it fast enough to supply the call.

☞ England, we learn, has had a very wet season. Many of the crops have been injured thereby, particularly the wheat. The call upon the United States for breadstuffs will be quite large in consequence. The season for bees and honey has also been, thus far rather discouraging. Mr. Hoge, who has been in Europe for several months looking after the honey interests, is expected home this month, and then we hope to learn more particulars concerning the honey crop, and the exporting prospects.

To get Bees out of Honey Boxes.—E. W. Darling inquires how to get the bees out of honey boxes. Place the boxes bottom upwards on the cap of the hive from which the boxes were taken; placing an empty box on the top of each one. The bees will go up into the empty box and cluster. They may then be shaken down in front of the hives they belong to.

Increasing.—The extensive use of beeswax for comb foundation has made that article very scarce. We have purchased some 1,500 pounds during the month of July, and want more. It is said that the annual product of wax in the United States is 20,000,000 of pounds, and it is increasing very fast.

The production of honey, too, has doubled within the past few years. Let us then ask a very serious question of those who delight in looking at the dark side. It is this: As last year's honey has been out of the market for at least 3 months—has not the *demand* very sensibly *increased?* True, prices are lower —but think of the "*ready sale*" and increasing supply and demand. Every article that achieves that much-coveted POPULAR DEMAND reaches lower prices, but with the "ready sale for cash," producers make more than with a slow sale and higher figures. Oh! "Let us have peace!"

New use for Honey.—The California Honey Balsam, for coughs, colds, sore throats, and lung diseases, is fast rising in popularity among the afflicted; so much so that it has become necessary to extend its manufacture. For this purpose a company has been organized to manufacture it as well as the Honey Lozenge. The Los Angeles *Herald* remarks that "it will not be long until this new enterprise will contribute to the demand for honey. These new uses of honey must be to the interest of apicultural pursuits."

☞ To prevent honey from candying after being taken from the comb, put it into a kettle and over the fire; boil it gently, and as the skum rises skim it off until it becomes clear, when it can be turned into the vessel you wish to keep it in, where it will keep clear and fresh without candying.

Chips from Sweet Home.

It is said "variety is the spice of life," also, "change is rest." In 1876, we purchased Zell's Encyclopedia, and among the first things we referred to was the bee. We found in it so many things that were interesting that we concluded to correct and give it to the readers of the AMERICAN BEE JOURNAL. We wrote the editors of Zell's Encyclopedia, and received the following answer :

> D. D. PALMER :—Your favor of the 8th inst. is at hand. We will be very thankful to accept your kind offer to correct the article on bees. We cannot say where the editor procured his information, but presume from works that were considered standard on the subject, which, as you know, are to practical bee men very unreliable. We are yours,
>
> Very truly, T. ELWOOD ZELL, DAVIS & CO.

I accordingly give the following article from Zell's Encyclopedia, and follow it with my corrections as foot notes :

BEE, *n.* [A. S. *beo*, probably from *buan*, *byan*, to inhabit, to dwell ; Du. *bye* ; Lat. *apis* ; Fr. *abeille.*] (*Zool.*) The generic name of a family of Hymenopterous insects, for the classification of which, see APIDÆ.

Of all the insect tribe, none have more justly excited the attention and admiration of mankind than the bee ; and yet, although it has engaged the study of naturalists for two thousand years, we still occasionally find, in the economy of this social and industrious little animal, some obscurely known or unelucidated fact, which is thought worthy of the labors of those who devote their time and abilities to the pursuit and advancement of this interesting branch of natural science.

The most important species is the honey bee, or hive bee, *Apis mellifica*, so long celebrated for its wonderful polity, the neatness and precision with which it constructs its cells, and the diligence with which it provides during the warmth of summer a supply of food for the support of the hive during the rigors of the succeeding winter. In its natural state, the honey bee generally constructs its nests in hollow trees ; but so universally is it now domesticated that we rarely find it otherwise than hived in our country, where they have been probably imported early from Europe.

Honey and wax are the two valuable articles of commerce, for which we are indebted to this useful insect.

Now, if we examine the structure of the common bee, the first remarkable part which presents itself is the proboscis, (*Fig.* 331,) an instrument serving to extract honey from flowers ; it is not formed like that of other flies, in the shape of a tube by which the fluid is to be sucked up, but rather like a tongue, to lap it up. When thus lapped out of the nectary, it is conveyed to the crop or honey-bag, where it undergoes but little alteration, and is then transferred or disgorged into cells destined to receive it.

While the bee is busy in extracting the sweets of the flowers, it becomes covered with the *farina* or pollen of the anthers ; this pollen it wipes off with the brushes of its legs, collects every particle together, and kneads it into two little masses, which it lodges on the broad surface of the tibia of each hind leg, where a series of elastic hairs over-arches a concavity, and acts as a sort of lid or covering, (*d*, *Fig.* 331.) Thus employed, the bee flies from flower to flower, increasing its store of honey, and adding to its stock of kneaded pollen, which is called *bee-bread*.

The abdomen is divided into 6 annulations or rings, which are capable of being contracted or extended at pleasure ; and the insect is internally furnished with a honey-bag, a venom-bag, and a sting. The honey-bag, which is as transparent as crystal, contains the honey which the bee has lapped from the flowers, the greatest part of which is carried to the hive, and poured into the cells of the honeycomb, while the remainder serves for the bee's own nourishment.

Wax is a peculiar secretion in little cells beneath the scales of the abdomen. It is from honey that the wax, by some internal process is elaborated. The wax oozes out between the abdominal rings, in the form of little laminæ ; it is then worked with the mouth, and kneaded with saliva, that it may acquire the requisite degree of ductility for the construction of the comb, which is finished with a substance called *propolis*, a glutinous or gummy resinous matter procured from the buds of certain trees.

The *sting* is composed of 3 parts ; namely, the sheath, and two extremely small and penetrating darts, each of which is furnished with several points, or barbs, which, rankling in the wound, render the sting more painful. This instrument, however, would prove but a feeble weapon, if the bee did not poison the wound. The sharp-pointed sheath first enters, and this being followed by the barbed darts, the venemous fluid is speedily injected. Sometimes the sheath sticks fast in the flesh, and is left behind ; but the death of the bee invariably follows. (1.)

Having examined the bee singly, we now proceed to an inquiry into its habits as a member of a social community. Viewed in this light, we behold an animal active, vigilant, laborious, and disinterested ; subject to regulations, and perfectly submissive. All its provisions are laid up for the community ; and all its arts are employed in building a cell, designed for the benefit of posterity.

A beehive contains 3 kinds of individuals, —a queen, drones and workers ; the queen is a female, and not only the ruler, but in great part the mother of the community.—(2.) The drones are males, and the workers are abortive females.

The sole office of the queen appears to be the laying of eggs ; and this occupies her almost incessantly, as a single one only is deposited in each cell, thus causing her to be in continual motion ; she is slow and majestic in her movements, and differs from the workers in being larger, having a longer body, shorter wings, and a curved sting. The queen is accompanied by a guard of 12 workers, an office which is taken in turn, but never intermitted; in whatever direction she wishes to travel, these guards clear the way before her, always with the utmost courtesy turning their faces towards her; and when she rests from her labors, approaching her with humility, licking her face, mouth, and eyes, and appearing to fondle her with their antennæ. (3.)

The drones are all males; they are smaller than the queen, but larger than the workers; they live on the *honey of flowers*, but bring none home, and are wholly useless, except as being the fathers of the future progeny; when this object is accomplished, they are destroyed by the workers. (4.)

A buzzing commences in the hive, the drones and the workers sally forth together, grapple each other in the air, hug and scuffle for a minute, during which operation the stings of the workers are plunged into the sides of the drones, who, overpowered by the poison, almost instantly die. (5.)

The workers are the smallest bees in the hive, and by far the most numerous; they have a longer lip for sucking honey than either of the others; their thighs are furnished with a brush for the reception of the pollen of flowers, and their sting is straight. The workers do the entire work of the community; they build the cells, guard the hive and the queen, collect and store the honey, elaborate the wax, feed the young, kill the drones, &c. The average number of these 3 kinds of bees in a hive is, 1 queen, 2,000 drones, and 20,000 workers. The eggs are long, slightly curved, and of a bluish color; when laid, they are covered with a glutinous matter, which instantly dries, attaching them to the bottom of the cell.

For 11 months the queen lays only workers' eggs; afterwards, those which produce drones; as soon as this change has taken place, the workers begin to construct royal cells, in which, without discontinuing to lay drones' eggs, the queen deposits here and there, about once in 3 days, an egg which is destined to produce a queen. (6.)

The workers' eggs hatch in a few days, and produce little white maggots, which immediately open their mouths to be fed; these the workers attend to with untiring assiduity; in 6 days each maggot fills up its cell; it is then roofed in by the workers, spins a silken cocoon, and becomes a chrysalis; and on the 21st day it comes forth a perfect bee. The drones emerge on the 25th day, and the queens on the 16th.

When the queen bee has an inclination to deposit her eggs, she goes forth, accompanied by 6 or 8 working bees as a guard, whose stomachs are filled with honey. She is very deliberate in her motions, and seems to proceed with great caution. She first looks into a cell, and if she finds it perfectly empty, she draws up her body, inserts her abdomen into the cell and deposits an egg. In this way she slowly proceeds till she has dropped 10 or 12 eggs, when perhaps feeling exhausted, she is fed by one of the attendant bees, who have surrounded her all the time. This is done by the bee ejecting the honey from its stomach into the mouth of the queen. When this has been done, the bee goes away and another takes its place. The operation of laying her eggs again goes on, and is succeeded by the same mode of feeding, the attendant bees frequently touching the antennæ of the queen with their own.

When the operation of laying the eggs is completed—and it generally occupies some time—the queen retires to that part of the hive which is most filled with bees.—During her progress, the surface of the comb is very little intruded upon, and the space seems purposely to be left unoccupied. Some few of the cells, however, in a brood-comb, are passed over by the queen, and afterwards filled either with honey or farina. These serve as deposits of food, from which the neighboring brood may be fed more readily, as such cells are never covered with wax.

It has been already stated, that the queen, for nearly a year, lays no eggs that are destined to produce queens. (7.) It therefore follows, that, if any evil befall her, the hive is left without a queen. It sometimes happens that she dies, or is taken away by the owner of the hive, to observe the result. For 12 hours, little notice is taken of the loss; it appears not to be known, and the workers labor as usual. After that period, a hubbub commences; work is abandoned; the whole hive is in an uproar; every bee traverses the hive at random, and with the most evident want of purpose. This state of anarchy sometimes continues for 2 days; then the bees gather in clusters of a dozen or so, as though engaged in consultation, the result of which seems to be a fixed resolution to supply her loss. A few of the workers repair to the cells in which are depsited the eggs of the workers; 3 of these cells are quickly broken into one, the edges polished, and the sides smoothed and rounded, a single egg being allowed to remain at the bottom. When this egg hatches, the maggot is fed with a peculiar nutritive food, called royal bee-bread, which is never given to any maggots but such as are to produce queens. Work is now resumed over the whole hive, and goes on as briskly as before. On the 16th day the egg produces a queen, whose appearance is hailed with every demonstration of delight, and who at once assumes the cares of a mother over the hive. When, under ordinary circumstances, a young queen emerges from the chrysalis, the old one frequently quits the hive, heading the first swarm for the season, and flying to some neighboring resting-place, is observed by the owner, captured, placed in a new hive, and a new colony is immediately commenced. Before a swarm leaves the hive, sure indications are given of the intended movement; the workers leave their various occupations, and collect in groups, especially near the door of the hive, as though in consultation on the important event about to take place.

As the summer advances, many queens are hatched, but the workers do not allow them instant liberty, as severe battles would take place between them and the reigning queen, in which one would be killed; the workers, therefore, make a small hole in the ceiling of the royal cell, through which the captive queen thrusts her tongue, and receives food from the workers. In this state of confinement the young queen utters a low, querulous note, which has been compared to singing.—When the reigning, or newly created queen, finds one of these captives, she uses every effort to tear open the cell and destroy her rival. To prevent this, the workers often interpose, pulling her away by the legs and wings; to this she submits for a short time, when, uttering a peculiar cry, called her voice of sovereignty, she commands instant attention and obedience, and is at once freed from her assailants.

The cocoons spun by the maggots of the workers and drones completely envelop the chrysalis; but that spun by the maggot of the queen appears imperfect, covering only the upper end of the chrysalis. It has been supposed that they are thus designedly exposed to the attacks of other queens, and their destruction, before emerging, facilitated. When the chrysalis of the queen is about to change to a perfect insect, the bees make the cover of the cell thinner by gnawing away part of the wax; and with so much nicety do they perform this operation, that the cover at last becomes pellucid, owing to its extreme thinness.

The combs of a beehive comprise a congeries of hexagonal cells, built by the bees as a receptacle for honey, and for the nurseries of their young; each comb in a hive is composed of 2 ranges of cells, backed against each other. The base or partition between this double row of cells is so disposed as to form a pyramidical cavity at the bottom of each. There is a continued series of these double combs in every well-filled hive—the spaces between them being just sufficient to allow two bees, one on the surface of each comb, to pass without touching.

Each cell is hexagonal, the 6 sides being perfectly equal. This figure ensures the greatest possible economy of material and space; the outer edges of the cells are slightly thickened, in order to gain strength; the same part is also covered with a beautiful varnish, which is supposed to give additional strength. The construction of several combs is generally going on at the same time; no sooner is the foundation of one laid, with a few rows of cells attached to it, than a second and a third are founded on each side, parallel to the first, and so on till the hive is filled—the combs which were commenced first being always in the most advanced state, and therefore the first completed.

The design of every comb is sketched out, and the first rudiments laid by a single bee. The foundress-bee forms a block out of a rough mass of wax, drawn partly from its own resources, but principally from those of other bees, which furnish wax from sacs, in which it has been secreted, that are situated between the segments of the body of the bee; taking out the plates of wax with their hind feet, and carrying it with their fore feet to their mouths, where it is moistened, masticated, and rendered soft and ductile. The foundress-bee determines the relative position of the combs, and their distance from each other, the foundations which she marks serving as guides to the ulterior labors of the wax-working bees, and of those who build the cells, giving them the advantage of the margins and angles already formed. The mass of wax prepared by the assistants is applied by the foundress-bee to the roof or bottom of the hive, and thus a slightly double convex mass is formed; when of sufficient size, a cell is sculptured on one side of it by the bees, who relieve one another in the labor. At the back, and on each side of this first cell, two others are sketched out and excavated. By this proceeding, the foundations of two cells are laid; the line betwixt them corresponding with the centre of the opposite cells. As the comb extends, the first excavations are rendered deeper and broader; and when a pyramidal base is finished, the bees build up walls from its edges, so as to complete what may be called the prismatic part of the cell.

The cells intended for the drones are considerably larger and more substantial than those for the workers, and being formed subsequently, they usually appear nearer the bottom of the combs.

Last of all are built the royal cells for the queens. Of these there are usually 3 or 4, sometimes 10 or 12 in a hive, attached completely to the central part, but not unfrequently to the edge of the comb. The form of the royal cells is an oblong, spheroid, tapering gradually downwards, and having the exterior full of holes. The mouth of the cell, which is always at the bottom, remains open until the maggot is ready for transportation, and it is then closed like the rest. When the queen has emerged, the cell in which she was reared is destroyed, and its place is supplied by a range of common cells. The site of this range may be always traced by that part of the comb being thicker than the rest, and forming a kind of a knot. The common breeding cells of drones and workers are occasionally made the depositories of honey; but the cells are never sufficiently cleansed to preserve the honey undeteriorated.

The finest honey is stored in new cells constructed for the purpose of receiving it, their form precisely resembling that of the common breeding-cells. The honey-cells vary in size, being larger or smaller according to the productiveness of the sources from which the bees are collecting, and according to the season.

It is remarkable that all animals that have been long under the protection of man seem to lose a part of their natural sagacity. In those countries where the bees are wild, and unprotected by man, they are always sure to build their waxen cells in the hollows of trees; but with us they appear improvident of their choice, and the first green branch which stops their flight is deemed sufficient for their abode. It does not even appear that the queen chooses the place where they are to alight; for numbers of the swarms, when they conceive a predilection for any particular branch, spontaneously settle on it; others follow their example, and at last the queen herself, finding the majority of the swarm convened together, condescends to place herself among them. The queen being settled, the rest of the swarm soon flock around her; and in about an hour the whole body seems to be perfectly at rest.

When a hive sends out several swarms in a year, the first is always the best, as well as the most numerous; for, having the greatest part of the summer before them, they have the more time for making wax and gathering honey, and consequently their labors are the most valuable to their proprietor. Though the swarm is principally made up of the younger bees, those of all ages generally compose the number of emigrants; and as a single hive sometimes contains upward of 40,000 inhabitants, such a vast body may well be supposed to work with great expedition.

Much might be said before exhausting the interesting and instructive study of the bee. We have in this article endeavored to point out those features of their social life that are generally accepted by authority, setting aside other and even marvelous facts, which do not appear to be based on sufficient evidence.

(1.) "It is not only an old saying but a common one, at the present day, that when a bee loses its sting, it dies. Probably this has arisen from a personal gratification, but is it so? From our observation, we think bees are not always disabled or mortally wounded by losing their stings. Many times we have had bees continue to try to sting us, also pass back to the hives and among the bees as though not conscious of having lost their sting. We know queens are not disabled to perform their duties by losing a part, or the whole of her wings. A. F. Moon records a case of a queen which had left her sting in his hand, but she continued as fruitful as ever.

(2.) It is conceded by all observing bee-men that the queen, or more properly speaking, the *mother-bee* is not the *ruler*, but the *ruled*. She does not lead out the swarm, but the swarm leads her out; she is averse to the bees building queen cells, and will tear down, destroy and kill the young queens while in embryo, unless watched, ruled and prevented by the workers.—When swarms issue, she does not come forth of her own free will, but is pulled, crowded and dragged out; and many times she tries to return, and sometimes succeeds. She is the *mother of all the community* when a hive is in a normal condition, but when there is no queen nor eggs to raise one from, they frequently have workers which lay eggs that always develop into drones.

(3.) The queen is never accompanied by a guard of 12 workers, neither more nor less; but a part of the time she is accompanied by workers which caress and feed her, just in proportion to the number of eggs laid.

(4.) Drones never gather any honey, but fill themselves before leaving the hive, and return empty. At any time when honey becomes scarce in the fields, the drones are killed, as there is then no probability of swarming, and consequently no young queens to become impregnated; the only exception to this is in an abnormal colony where there is not a fertile queen.

(5.) When drones are no longer needed in the hive, they are pushed, or dragged out of the hive, their wings gnawed so that they may not return, or even stung to death.

(6.) Occasionally a queen will lay some eggs before mating with a drone; if so, they will all produce drones. Of those laid after mating, produce mostly workers depending upon whether laid in drone or worker cells; and thus she continues from 4 to 5 years. Sometimes from old age or injury, she lays eggs which hatch to drones. The egg which is destined to produce a queen is determined by the workers, and not the queen, for any egg which will produce a worker will produce a queen, by being given an abundance of room and food.

(7.) If so, from where are the eggs procured to produce queens? The same egg that will produce a worker will, under proper conditions, produce a queen.

Eliza, Mercer Co., Ill. D. D. PALMER.

KRETCHMER'S FEEDER.—Some of the points claimed for this feeder by friend Kretchmer, are as follows: "It will do all that other feeders do, and has some advantages beyond even that. It can be set in a common auger hole; it has a firm stand on the hive, and excludes light and rain; the VanDeusen will let rain in around the feeder when feeding from the outside and requires a large hole; mine *does not ventilate* when feeding, but can be used to *close* the feed hole, or ventilate at pleasure when not used as a feeder, allowing the escape of foul air from the centre of the hive, without admitting rain or light, and is hence never glued up."

It can be obtained at this office.

"RED HOT" is what everybody calls the weather of July, this year. It has been hotter than for years. The bees have, seemingly, enjoyed it.

Southern Notes.

Improvement of the Italian Bee.

The Question has been asked: "Has the Italian honey-bee any fixed characteristic mark, by which their purity can be ascertained?"

A German writer of considerable distinction, Mr. Gravenhorst, says "Italians are pure when they bear distinctly and fixedly the marks which distinguish those bees in Italy and Italian Switzerland, in which they have been found existing for centuries past, unaided by special arts of cultivation, and as they exist there at the present day."

To this class of districts belongs upper Italy and Bellinzona, in the canton of Tessin and Roveredo, in the canton of Grisons, in Switzerland, the marks which we find distinguishing the Italian bees there. They invariably show three yellow bands, distinctly impressed. The color of these bands, (of which 2 are broad and 1 is narrow,) varies somewhat, according to the locality. In upper Italy, the color of the bands is somewhat light, while in Tessin and the Grisons it approaches more that of the chestnut, in color. Some are yellow to the extreme tips of the abdomen, while others have bands less yellow or brownish, and from the third abdominal segment their color passes gradually into a darker shade.

Many of these queens produce princesses all uniformily alike, of yellow or brownish color, whereas the daughters of others are more or less dark, not resembling their mother; but all the queens derived from the districts named, without exception, produce workers having yellow or brownish (orange-colored) bands.

Such is the archetype of the Italian bee.—All deviations therefrom are no longer pure, whether passing in one direction or another. Our friend, and others, have admitted that it was formerly customary to maintain in Germany that there was in this bee, even as obtained from Italy and Italian Switzerland, a slight dash of black blood. But our friend does not concede this to be so now, but that in Italy and Italian Switzerland an archetypical race has been gradually formed; and, by careful selection of queens for breeding, Italian queens have been produced, which, as regards their color and that of their progeny, are considerably lighter and handsomer than the original stock.

But he is also of the opinion that these brighter and handsomer bees are the product of artificial, or rather scientific breeding; and of the peculiar circumstances amid which they came into existence, he says:—"It is stated, that the young queens, now bred in America, from imported stock, are brighter-colored than their mothers, but can by no means admit that these bees are genuine Italians, because they lack the genuine characteristic marks of real Italians. They are, if we so please to call them, improved Italians; or, they may be more accurately named American Italians."

Dzierzon says, that by careful selection of queens for breeding stock, he secured a variety in his apiaries, which are prettier or brighter than those procured from Italy or Italian Switzerland. But that Dzierzon's Italians, exclusively, or those brighter American Italians, alone are to be regarded as genuine, is certainly not the fact. He further says that the bright Italian has less economic value, &c.

It is an altogether different matter, when, from a large number of colonies, a selection is made from among the best marked bees and queens, and the best, in all respects, are taken to breed from. In this he admits that no one has been more eminently successful than Dzierzon. His long experience, and peculiar genius as an apiarist, had enabled him to produce in his apiary the most beautiful workers, combining at the same time *all* the other desirable qualities, and very distinguished specimens of these so called "Italian queens."

BRIGHT ITALIANS *vs.* DARK.

Although our friend admits that the peculiar genius of Dzierzon, as an apiarist, has enabled him to combine all the desirable qualities of these so called "Italian queens," yet, he cannot concede that they are genuine Italians.

Is it possible that our noted bee-keeper, Dzierzon, never purchased any queens from the districts above named, and he the most noted bee-keeper in the old country? It is possible that Dzierzon's light colored Italian bees, and those bred in America, even, from imported mothers, and from the districts as above named by our friend, and as nothing coming therefrom but the "Simon pure," yet, he cannot concede them to be pure, or genuine Italian bees, and calls them "Improved," or "American Italians," from the fact that they are lighter and more beautiful in color, although they bear the 3 distinct and uniform bands that the darker colored ones do; yet, they must be called improved or American Italians!

Now, Mr. Editor, if you or our friend can inform us which horn of the "dilemma" to take, we would be glad. It is not the first time that this matter has been jumbled up. To what conclusion can the novice in apiculture come by reading the description given of the pure Italian bee? First, he says, they invariably show 3 yellow bands, (correct,) the color of these bands varies according to locality. Would not the same rule hold good when shipped to this country? Our friend, perhaps, don't know, and consequently calls them American Italians, and *not* genuine.

Again, in upper Italy, the color of the bands is some lighter, while in Tessin and the Grisons it approaches more that of the chestnut; and as it regards coloring, some are yellow to the extreme tip of the abdomen, while others have bands, legs lellow or brownish, and passes gradually into a darker shade. He further admits that many of these queens produce princesses, all uniformily alike, of yellow or brownish color; whereas, the daughters of others are more or less blackish or dark, not resembling their mothers. But all the queens from the district named will produce, without exception, workers having yellow, or brownish (orange colored) bands.

Here we have several shades of color given, as described and set forth by our friend, which our experience carroborates. As to their varying in color, we often think of the description the old lady gave of her Burkshire pigs. She said, "they were ring streaked, and speckled, but she knew they were pure, as they were bred in *Ohio*." So with the Italian bees; they vary from light to dark, and some so very dark that they show impurity. They seem to vary as much in color as did the old lady's pigs.—But our friend has given us a very elaborate description of the place where the Italian bee is found without spot or blemish. As nothing is found in the districts named but the pure Italian bee, we would advise our importers to obtain bees from the districts named.

We have bred the Italian bee from both home-bred and imported mothers, ever since its first introduction into this country; while a large majority of the queens bred workers of uniform markings, viz.: with 3 yellow bands, but of various shades, as well as various grades of color, we have also found that the queens often differ, as to color, as do the workers. So far as it regards the economic value of them, we have only found that it lies in the scale of the color of them—not in the superior qualities, such as prolificness, hardiness and their ability to store honey, &c. But the beautiful, bright-colored Italian bee finds much quicker sale than the dark; and the brighter the bee, the greater the value. These bright Italian bees, although bred direct from imported mothers, our friend Gravenhorst calls imported, or American Italians, and concedes them genuine, yet admits that some of the queens, as found in Italy, are yellow to the tips of the abdomen; and from the description given of the various colors, as produced from the different localities, that they, too, differ much.

The question will be asked, no doubt, why Mr. Gravenhorst calls these bright, or light-colored Italians impure, although bred from imported mothers? If the bright, or light-colored Italian bee breeds her workers uniform in their markings, then they are as pure, and we have very good reason to believe purer than those of a much darker strain. However, we will not argue this further, but will say, if the description of the Italian bee is correct; from its first history there has been two classes or colors described, the light and the dark; and the preference was given to the light golden color,—but not until within a few years—since the darker class has been largely imported did we hear that they were superior to the brighter color, and we cannot but think our friend in error, when he calls the bright yellow Italian bee, as now bred in this country, impure.

Can it be possible that the American bee-keeper cannot tell when his bees are uniform in their characteristic marks, when it is a well known fact that America leads the world in apiculture?

About those queens producing princesses uniformily, while others not duplicating themselves at all, is evidence of their not having any fixed characteristic mark of their own, as to duplicating themselves in points of color. Here we agree with Mr. Gravenhorst, and will further say that we believe that neither Mr. Gravenhorst or any other man can produce Italian queens that will duplicate themselves every time in their color. It cannot be done with the Italian bee any more than it can with the human family! Take any Italian queen and raise 25 queens from her, under any circumstances, and some of the queens will vary in shades of color. Well might friend Dadant say he could not see how a light-colored queen could produce dark-colored daughters, and *vice versa*; and suggest that perhaps it was the honey, pollen, or the weather being too wet or cold, the wind blowing so, and so, or electricity. Why not say they were reared in the wrong time of the *moon*?

From careful experience and observation, we have found, while breeding from the best imported Italian bees, that they will produce queens all the way from a golden color to a jet black; yes, even to a shining black. We have tested some of these shining black queens, bred from imported queens, from the districts described by our friend, and found that they bred as bright and uniform workers as any bees that we have ever seen.

We once received a queen from Rev. A. Salisbury, of Illinois; although quite a small one, she bred the largest bees, and was one of the most prolific breeders that we ever saw. Her bees were as uniformily marked as any could be, but her queens were of different shades of color—all good—and she often bred a dark queen, black as black could be; and these black queens produced the handsomest and brightest workers we ever saw.

We received an order the other day for an Italian queen; the order for which said, "Send me a queen that will duplicate herself every time as to color, viz.: bright yellow." He wanted no other. Well, we could not fill this bill, and we did not believe any other man in America could; we knew of none, unless it was those spoken of by our friend, that produce princesses "all uniformily alike." If such queens can be found, they will command any price asked for them; but they will not be found in this generation.

ARE BEES PROFITABLE?

The above question is frequently asked, and we can only reply "no and yes." If bee-keepers insist on managing bees as did their ancestors, they will find it a rather discouraging task; on the other hand, if they will manage them under the new system of bee-keeping, with a little knowledge of their habits and requirements, the result must be one of profit and pleasure.

Remember, the very first element in successful bee-culture is an intimate knowledge of the bee, and this can not be acquired in a day, although very easily learned when the novice is ready and willing to apply himself to the study and nature of their wants and habits. It can not be acquired in a day from books. Every step that is taken through the labyrinthian mysteries of the bee hive, only fits and qualifies for success in the enterprise.

We would recommend to beginners, if profit be their object, to commence with only a few colonies, in a good, simple, movable, frame hive. This will enable them to often inspect the interior of the hive, and every inspection will prove a valuable lesson, and will enable them to more wisely enlarge upon their investment—bearing in mind that strong swarms are the ones that pay, and he should ever labor to keep all in that condition. The beginner. of course, has in his mind in what special product he will receive his profit—bees or honey. He must consider that one is at the expense of the other. If he wishes a large yield of honey, he can not expect to increase his stock so fast as if their stores are left with them, and given to them in artificial swarming, as every comb, whether containing brood or honey, adds great strength to the colony. The apiarist is laboring for dollars and cents, and the greatest amount that can be procured from a single colony.

Then the question is, "bees or honey ?"—If bees exclusively, then at the expense of the surplus honey ; and by artificial swarming, they can, in a good honey season, increase their stocks very rapidly. But always keep colonies strong.

"But," says one, "we want honey."—Then you must proceed in a different way. If honey be the object, you will need all the bees that your hive will produce, kept at home, for surplus honey. Besides, your hive must possess sufficient capacity to engage all the bees in labor. Room must be given for a strong and constantly increasing force of workers, or they will be compelled to either leave for the woods or to hang idly outside of their hive, simply for the want of room. The beginner should remember that the greatest number of bees that they can keep at work in the boxes, the larger amount of honey he will receive for his trouble. A colony of bees in the spring, with a plenty of honey, brood and bees, will be very apt to give their owner 100 lbs. of honey in a good season.

For a beginner to produce such results, he will, of course, need to study the best way of applying boxes, that his bees may have the greatest facility for their work.—We manage them in this way : Put on the boxes as soon as the bees begin to work in the spring. As soon as they get fairly at work in the boxes, building comb, raise up the boxes and place an empty set underneath them. This will draw up nearly all the surplus bees, uniting their work with boxes and hive, thus giving the queen full control of the brood-nest, which, if not given, the workers would occupy too much of it for honey, thereby lessening the strength of the colony or causing them to swarm out.

We keep adding boxes as above described, until we often have from 4 to 6 set on at a time. Adding boxes in this way, the surplus honey is nearly all stored above, and the queen, with a sufficient force, will manage matters below. Following this plan, a large force of workers is continually being added, which is the life and prosperity of the colony, and the profit of the bee-keeper.

In the question of profitable bee culture, there is involved a question of resources.—The floral treasures of the country must be taken into consideration. There are portions of our country where bee-keeping would not prove so successful. A very little portion of it but a few colonies may be kept for the benefit of the family. We have hardly made a commencement upon the honey capital of the country, and the large amount that is yearly gathered, is but a drop saved from that yearly going to waste. Where honey plants are not a natural growth, we have many kinds of plants that are soon brought to yield a large amount of honey. All that is required is a little trouble in sowing and setting out trees, that will soon pay largely for the honey alone. The linden tree will grow in almost any soil, and yields largely in honey of the finest quality.

Commence on a small scale ; study the habits and nature of the bee, and with interest and energy the beginner will be likely to succeed every time.

Rome, Ga. A. F. MOON.

From Our Home Journal.

Bee Pasturage in the South.

Apiculture in the South could be made much more profitable if more attention were paid to the cultivation of the honey producing plants. The principal source of honey in the States south of Tennessee are the fruit blossoms in early spring—the Black Gum (*Myssa Multiflora,*) which yields large quantities of honey ; the tulip tree, and a few other flowering trees and plants of minor consideration. We have no large fields of clover, no basswood groves, no acres of buckwheat. We have a few bees in old boxes, logs and kegs, stowed away among the weeds, and often by piles of promiscuous rubbish. If, perchance, they make their unworthy owners a few pounds of surplus honey they are considered to have "done well ;" but if they fall a prey to neglect and the worm, they are set down as "unprofitable servants." No one can expect to breed and rear fine stock without thorough attention. He must provide for all their wants. He should have his fields of corn, oats and grass. The bee is no exception to the rule. It does not and cannot gather honey from every opening flower, as many persons suppose. They need proper pasturage. It is impossible for bees to be any source of profit in a section of country where there are few honey-yielding plants. It should be the duty of every bee-keeper to cultivate as many of such plants as possible.

White clover will grow and do well in most all portions of the South, if the ground is well prepared, and not too sandy or poor. Where shade trees are to be planted in our yards, or along our lanes or highways, it would be best to plant such as make good, bee pasturage. The Linden is a tree to be particularly recommended. This is a tree of quite rapid growth, fine foliage, beautiful appearance, and makes a good shade.—

It grows and thrives well in Middle Georgia, and I have no doubt would do well in any portion of the South. Last season the writer sowed a plat of ground to buckwheat in the middle of July, which made a fair show, but had it been sown in August or the first of September, it would have done better. My bees luxuriated on it as long as it blossomed. My experience is against the opinion that has been advanced, that the buckwheat is worthless in the South as a honey plant. All honey-producing flowers, in every country, are liable to vary in the amount of their saccharine secretion with the peculiarities of the season. Hence, because a flower fails to yield its sweets one season, is no reason why it may not abundantly do so the next. Catnip (*Nepeta Cataria*) is also rich in honey, and should be planted in every nook and corner, in all of the out of the way places.

The writer would suggest to all bee-keepers to take note of all plants that bees frequent. Note the time of commencement of bloom and the duration, also the approximate increase of honey stored during the time such plants are visited by the bees.—Observations of this kind, made as carefully as possible, would do much to advance bee-culture in the South.

J. P. H. Brown.

For the American Bee Journal.

Standard of Purity.

The call for a standard of purity in the Italian honey bee is a move in the right direction, and should never be dropped until the desired end is attained and the result published in the form of propositions, by which dealers in Italian bees are to be governed. We give the following:

The queen's abdomen, a bright yellow and tipped with black, with or without black points on the back. In workers, the first band next to the thorax very narrow; the second one broad, and separated from the first by a very narsow black ring; the third and last, not so broad as the second, but well defined; the yellow free from mottles, and the bees in the same colony uniformily marked, though the shade of color in different colonies may vary from a pale, light yellow to a heavy leather color. Drones more abruptly marked than workers; the bands not so uniform, and intersperced with black clouds with well defined margins; the under surface of the abdomen yellow.

The above is our standard of purity.—Before leaving the subject, we wish to call attention more closely to some peculiar markings of workers and drones: The exterior of the abdomen of each is composed of segments. In the Italian worker, the first 3 of these segments are a bright yellow. The posterior margin of each is marked by a black border, which separates the yellow into 3 bands in the pure stock.—The remaining segments are black, the middle of each is marked by a copious growth of yellow or light colored hair or down, and when the down is very light on the bees, some call them albinos.

Diametrically opposed to the above is the markings of the drones. As with the workers, the first three segments are principally yellow, but contrary to them the black border is on the anterior margin of these segments. Want of prominence in the first segment makes it hardly discernable. In the second segment the black anterior border stands out boldly, while the remaining part of the segment is yellow. In the third segment the black border is overlapped by the yellow of the second and does not appear so bold as the preceding, while the remainder of the segment is intermingled with yellow and black and at the same time overlaps the next. These give to Italian drones that peculiar marking which tends to excite admiration. The remaining segments may slightly share the yellow on their posterior margins.

S. D. McLean.

Culleoka, Tenn., July 9, 1878.

From the Home Journal.

What is Honey-Dew?

Honey-dew is a substance—not an element, but composed of elements. These elements must be compounded somewhere. The composition takes place in plants.—Every plant is a laboratory within itself.—All our sugars and sweets come from plants, and are taken into the plants in an elementary form through the leaves.

Plants, like animals, are so organized as to throw off by excretion excessive matter. They sometimes imbibe too much of the one element, or too little of the other, and for want of proportion of the elements, assimilation is retarded, and then the plant relieves itself by excretion. An undue proportion of the azotized and the unazotized substances causes our large forests of oak, hickory, and many other trees to excrete that sweet, gummy substance, known as honey-dew. It is this that causes the grass of the broad Western prairies to become so gummy as to adhere to the feathers of the wild turkeys and other birds that wade through it, till they cannot fly. It is this chemical derangement of plants that causes honey-dew.

Says Langlois: "I observed, during the dry summer in 1842, that the leaves of the linden tree became covered with a thick, sweet liquid, in such quantity that for several hours of the day it ran off the leaves like drops of rain. Many kilogrammes might have been collected from a moderate-sized linden tree.

In Grisen, Mr. Trapp possesses a *clerodendron frangraus*, growing in the house; it exudes on the surface of its leaves, in September, large, colorless drops, which form regular crystals of sugar candy upon drying; showing the change proportional of carbon, hydrogen and oxygen as the season changes and the organic activity of the leaf changes. The proportion is not assimilable nor nutritious to the plant; the plant organs in their functions excrete it.—Thus we have honey-dew, a product of plants by chemical derangement.

Says Liebig: "In a hot summer, when the deficiency of moisture prevents the absorption of alkalies, we observe the leaves of the lime tree, and of other trees, covered with a thick liquid, containing a large quantity of sugar; the carbon of this sugar must, without doubt, be obtained from the carbonic acid of the air. The generation of the sugar takes place in the leaves; and all the constituents of the leaves, including the alkalies and alkaline earths, must participate in effecting its formation. Sugar does not exude from leaves in moist seasons; and this leads us to conjecture that the carbon which appeared as sugar in the former case would have been applied in the formation of other constituents of this tree, in the event of its having had a free and unimpeded circulation."—*Agr. Chem., page* 135.

"The assimilation of substances generated in the leaves will depend on the quantity of nitrogen contained in the food. When a sufficient quantity of nitrogen is not present to aid in the assimilation of the substances destitute of it, these substances will be separated as excrements from the barks, roots, leaves and branches. The exudation of manile, gum and sugar in strong and healthy trees and plants, cannot be accredited to any other cause."—*Liebig.*

Many other scientific and agricultural chemists have written similarly touching this subject; and I think it is well substantiated that honey-dew is a production of plants, and is exuded by plant force—not insects. That honey-dew falls, that it is extracted by puncture of insects, and the many other ways equally fallacious—is argued by too many who are well capacitated to know better, if they were only more thoughtful and investigative and less willing to be deceived. K.

Smith's Grove, Ky., July 8, 1878.

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Chattanooga, Tenn.

"The question has been often asked, 'Will queens sting?' I will give my experience: Last summer, while experimenting with virgin queens, I noticed, on two or three occasions, while holding them between my thumb and finger, they would curve their abdomen and thrust their stings out just as a worker would under similar circumstances. I was always very careful that the sting should not come in contact with my fingers. Although I have never been stung by one, yet, to judge from their actions, I should say emphatically that a virgin queen *will* sting if provoked." H. C. DODGE.

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☞ About the first of June, friend J. W. Winder, of Louisiana, was taken sick, and has been bed-ridden ever since. We learn with regret that he is still very weak. Had this sickness not intervened, he would, we hope, ere this have fixed up that matter of which Novice complained in May last. THE AMERICAN BEE JOURNAL neither approved the attack by Novice, nor the defense by Mr. Winder. A moral obligation can never be liquidated by malice, neither can it be paid by quietly submitting to real or supposed abuse.

Foreign Notes.

Italian Bees in Australia.

In a California paper we notice a letter from Queensland, Australia, from the Hon. Angus Mackay, concerning the successful introduction of Italian bees into that section of Australia. The editor remarks:

"For many years past, efforts have been made to introduce them, but they failed to 'cross the waters' alive, when Mr. Mackay was with us here, as Queensland's Commissioner, he desired us to prepare one of our best stocked hives, that he might take them on with him. We, therefore, selected one of our largest and best colonies, having ample brood comb and a full stock of honey; we prepared it with a fine wire cage on top with holes for the bees to pass up for air, and made all the needed fixtures to have it go on safely; but, however careful *our work* may have been done, we accord to our honored friend's continued care of the bees on the voyage their final grand success. Mr. Mackay took them into his state-room and had them lashed to the side safely, and on pleasant and calm sea days rolled them out on deck to give them air. Mr. Mackay watched his 'pets' with great care and kindness—he did his work with the bees as he had performed all his duties as the Commissioner, faithfully and splendidly, and hence the success.

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A Cure of Foul Brood.

On June 21st, I discovered that a colony received from Baron Rotschultz, of Posendorf, Carniolia, had become foul broody.—A few days after its arrival, in spite of feeding, the number of bees did not increase. But as foul brood is unknown here, and I had never seen this malady, I thought that the small quantity of the brood, the lack of industry and desire to build combs, were the result of weakness or old age of the queen; and I resolved to replace her, on the first opportunity, by giving the colony a queen cell. I gave the colony some brood from other hives, but the sickness of the colony increased, and seemed to come from the fermentation of a liquid substance. Then I resolved to further examine the hive.

I saw that the bees were mainly on the brood comb that I had given them, and that the brood which came with the bees, from Posendorf, was altogether isolated; that the capping of a dozen cells were deeply pressed down; that all the honey in the uncapped cells (there were no other in the hive) was fermenting, and that the bad smells came from the combs from Posendorf. I cut with a penknife some of the cells whose cappings were pressed down, and saw the brown matter they contained. Then I discovered the cause—foul brood.

I had on hand a little salicylic acid—a substance which is very dear. Then my eyes met a vessel full of soda. Soda stops fermentation more readily than salicylic acid. I resolved to try soda, before getting salicylic acid. I prepared a pailful of a strong solution of soda and water, warmed by the sun. The first frame was dipped in the solution several times, together with its bees and honey. A few bees swam, the others clung firmly to the comb and were put back with it in the hive. I gathered the swimming bees with a skimmer, and put them in the sun to dry. None of them perished; and after a few moments all returned to the hive. Fermentation and smell disappeared immediately from the immersed combs.

After this, I dipped in the soda, all the combs coming from Posendorf, with their bees and all. The queen had fled to the sound combs that I had given to the colony. Mr. L. Krancher, publisher of the *Bienenfreund*, visited my bees and also noticed the foul state of this hive. A few days after, I resolved to bathe the queen in alkaline water, when I noticed her foul smell. For the bath I used 250 grammes (about 9 ounces) of carbonate of sodium, in a pail of water, containing 8 or 10 litres, (quarts), in which I mixed a little salicylic acid.

The result is complete, so far, July 15.—The smell of the hive is normal; the brood is fast spreading; there is now capped honey in the hive; the bees now show some readiness to sting; they had none when they were sick; the pressed cells, that I had opened before bathing, have disappeared to such an extent that it is impossible to detect one, even with the most careful search; and the bees begin to fill their empty frames with comb.

This remedy seems more advantageous than the solution of salicylic acid; not only on account of its cheapness—10 centimes (2 cents), instead of 3 francs (75 cents)—but also on account of its prompt effect. Instantly—the queen, bees, honey, brood, combs, frames, and everything was purified of the disease.

This remedy was not only administered externally, but as the bees were compelled to suck the lye mixed with the honey, the disease was annihilated in their stomachs. The bathed bees were also purified externally. The drying of the wet bees and of the combs was soon completed by the warm weather. That the bath kills the uncapped brood, is of very little consequence, when compared with the other advantages of this remedy.—*A. C. Kermann, of Thurm, in Deutscher Bienenfreund.*

From Dom. Poultry Gazette.

What a Woman knows about Bee-Keeping in South Australia.

"Granger Kate" discusses this subject in the *Southern Farmer*. She says a good many things that apply here as well as there; but unfortunately the grub has come in upon our hives and destroys our calculations unless the utmost vigilance is employed.

It requires but a small capital to start bee-keeping with on a small scale, and as skill and knowledge increase, numbers increase. The fear of being stung deters many from keeping bees who would otherwise gladly engage in it; and really, to some, the sting of a bee is no small matter. To have one's eyes closed up for a day or two, and perhaps suffer with a severe headache the while, is by no means pleasant.—This, however, can be avoided by providing one's self with veil and gloves.

A cheap and easy way to make a bee veil, and as good as any, is as follows: Procure a piece of plain, coarse, black cotton bobinet, sew it up as a sack, run a draw string in the end, which can be tied round the crown of the hat—any kind will answer—put a string in the lower end also, to tie round the neck, or simply tuck it in around the neck, which will answer quite as well. Should a bee strike the veil with the intention of stinging, the brim of the hat will hold it at sufficient distance from the face to render it impossible for it to reach one.

Gloves can be rubber, or thick, coarse, home-knit woolen gloves, wet in cold water previous to using.

The best thing I ever tried for a bee sting, to neutralize the poison and relieve the pain, was lye soap or common soda; either will do.

Gentleness and the judicious use of a little smoke, are the most effectual bee charms. No one should attempt to keep bees in anything but movable frame hives. The time to make bee-keeping successful and profitable in the old logs and boxes is gone. They afford too many hiding places for the moth and its progeny of worms, and make it too difficult, indeed next to an impossibility, to extricate them. A good, plain, moveble frame hive, well painted, will last a long time. In reality, there is no such thing as a moth-proof hive, and he who sells one as such is either an ignoramus or something worse. Common sense will teach anyone that where a bee can enter, a moth can enter. The secret of success in keeping down moths is to keep your colonies full and strong, in close, well-made hives, and the bees will attend to the other part of the business themselves. The bee-keeper is rich in proportion to the strength of his colonies, and not the number of his hives. If one wishes bees to do well, by all means keep the colonies strong.

Foreign Items.

GLEANED BY FRANK BENTON.

ARTIFICIAL COMBS.—M. Junger, of Jaillien, writes to the editor of *L'Apiculteur*, Paris, as follows: "I send you a little box containing a sample of artificial comb. As you can see the affair is still in its infancy, but it will grow. I have only made the cells on one side. What I am trying to determine is whether it is possible practically to make wax combs resembling very closely natural combs. So far good; I have proved that one can make combs somewhat like those constructed by bees, so far as regards dimensions and construction. In another package I will send you a sample having cells on both sides. This indicates the truth of what the abbot Webber has asserted for two years, namely, that the production of artificial comb as it is now made, that is with only the middle wall or septum is still in its infancy." *L'Apiculteur* says the comb made by M. Junger is excellent, and gives hopes of a work similar to that of the bees.

STINGS.—"Still another remedy for the *certain* cure of bee stings! Take a fresh tomato leaf, crush it, and rub upon the part stung. The pain will disappear immediately, and without the slightest trace of swelling. We would like to be able to transmit to posterity the name of the discoverer of this method."—*L'Apiculteur.*

M. E. FRANCOIS, of Catillon, France, has published a 16-page pamphlet entitled "*Nouvel Apercu sur les Abeilles*," for some years. In the last number, which is full of strange statements, M. Francois says there are male bees of two kinds: "Female males and male males." He "has seen males lay."

MERITED HONORS.—Herr Gustav Budiegizki, President of the "Society for the elevation of bee-culture in Bohemia," spoke as follows at the Carlsbad Convention: "Director of Chancelory Cori, of Breux, Bohemia, has, in union with the worthy Count Kolowrat, Krakowsky, rendered very great service by the importation, acclimation, culture and introduction of the valuable Cyprian bees, and therefore I cannot refrain from expressing publicly my thanks to the noble Count, and, as President, in behalf of the Association, to bestow upon Herrn Cori the diploma betokening the highest honors." This gentleman made the following reply: "Highly esteemed officers of the Association: Words to give fitting expression to my thanks and to the feelings of my heart for this unexpected honor, fail me. The worthy Association will, however, accept in return my warmest assurance that I will further work for and serve its interests so far as time, opportunity and strength are granted me." [Applause.]

One cannot help but wonder if the bee-keepers of America will as readily give proper credit to the worthy gentlemen in Massachusetts who have been enterprizing enough to bring the Cyprians to America.

For the American Bee Journal.

Hannemann's Bee Sieve.

Mr. Hannemann, a German bee-keeper residing in Southern Brazil, writes in substance the following to Herrn R. Mayerhoeffer, editor of "*Der Bienenvater*," of Prague, Bohemia:

"In districts where bees swarm so often that the bee-keeper is compelled to kill a number of his colonies every autumn, this sieve is of great use. Swarming should be hindered in colonies that are intended for honey-producing. But weak colonies cannot be used for this purpose, and here comes in the use of the sieve. It is better to have a few colonies in an excellent condition than many in poor condition. I can secure the conditions for honey-storing if I separate the queens from the bees designed for honey-gathering, by inclosing the former in cages placed in the center of the hive, so as to hinder brood-rearing. Mr. Hannemann uses hives containing 11,000, 13,000, and 31,000 cubic inches respectively, containing 11, 13, and 14½ kilogrammes of bees. During 1876 he made a large hive containing a space of 31,500 cubic inches and placed therein 36 kilogrammes of bees. This hive furnished 244 kilogrammes of comb honey and 9½ kilogrammes of clear wax. Of course I divide my bees in stock hives. The giant colonies in these honey-producing hives have lost their bees by the end of the harvest, but I have no more need of them for it was the harvest I wished to secure. The queens, however, having been kept from laying during the season, are at its end in good condition and prolific."

I think Mr. Hannemann's system would be very good for all countries where bees swarm considerable and where a good pasturage without interruption exists. It must be best adapted to the Southern States and California. I request my bee-keeping brethren to experiment in this direction and send me their reports, or else communicate them to the JOURNAL. R. MAYERHOEFFER.

MANUAL OF THE APIARY, by A. J. Cook, Professor of Entomology in the Michigan State Agricultural College. Second edition, revised, enlarged, mostly re-written and beautifully illustrated. Published by T. G. Newman & Son, Chicago. This work is exceedingly valuable, indeed, indispensable, to apiarists, as it contains the latest discoveries and most recent improvements in methods of apiarian management and bee-keeping apparatus.—*Voice of Masonry.*

The honey bee has come to the front with the purfume of summer flowers, and one of its best friends, A. J. Cook, professor of entomology, in the Michigan State Agricultural College, has written its history, its habits and its home and how to tame it—in a handsome bound volume, amply illustrated.—*Chicago Daily Post.*

Correspondence.

For the American Bee Journal.

A Young Man's Experience.

My information in apiculture began with the winter of 1876, when I began perusing "Quinby's Mysteries of Bee-keeping;" and purchased 10 colonies of hybrids in box-hives. I transferred them in the latter part of April, 1877, to the Langstroth and Quinby hives, but 3 of them had dwindled. In June, I received 3 more in place of them.—On May 26, I divided one of the strongest, so as to obtain queen cells and queens for other colonies when I divided them. In 10 days afterwards, I took out 10 queen cells, leaving 1, out of the 16 started 9 days before. Four of the cells were used in dividing, while 6 were put into nuclei hives. I also made colonies by taking 2 frames with some brood, and putting them into an empty hive and introducing a queen cell or queen.—Sometimes I had to strengthen them with a frame of brood. Keeping reserved frames in nuclei hives, during the season, I found profitable. Colonies were also made in August, when buckwheat was yielding bountifully, and did well.

As I was working at home, for father, I intended not to let a colony swarm naturally; but on the 30th, of August, as I was extracting, I found a double handful swarm on the cross-bar that holds the boards which covers the bee hives; and, not expecting a swarm at that time of the season, I brushed them off; but they flew back to their place again. I went on extracting, but a few minutes after, they appeared like a swarm in the air, and soon settled on the board that shaded the hives; then I tried to catch the queen; she flew up in the air and back to the bees several times before I could cage her. Only 1 drone accompanied the swarm. I put the little swarm into an empty hive with a couple of frames of brood and bees, and gave them a good smoking when uniting them, giving them a frame of brood every few days, until their hive was full. They became one of my strongest.

I got some comb foundation, which I liked very much. I tacked a strip of paste-board with the edge of the comb foundation to the under side of the upper bar in the frame. In putting surplus boxes and sections for surplus honey, I discarded the honey board, believing they will work faster, and go up into the boxes sooner when it is removed. I also learned that taking a section of comb and putting it between empty sections will make bees go up immediately.

We got but very little honey from fruit blossoms. White clover commenced to bloom June 10, but there is not much of it in this vicinity. Basswood bloomed the 21st of July, lasting only about a week.—The bees were busy on it while it lasted.—Just as the basswood season ended, buckwheat began, and lasted 5 weeks, yielding abundantly. It was from buckwheat that I got most of the honey this season. I extracted all the honey in the beginning of the buckwheat season, so they wintered on it. I got in all, of extracted honey, 377 lbs. 7 oz; with comb honey I was not very successful; but few would work in sections; from my best colony I got 72 lbs. and 13 oz. In all I got of comb honey was 138 lbs. and 14 oz. I think I could get 300 or 400 lbs. more of buckwheat honey, had I time to extract it.

I commenced this season with 8 colonies, most of them in Langstroth hives; next season they will all be transferred to the Langstroth hive. There are but few bee-keepers here, only one in this vicinity who applies science to apiculture. To "Langstroth, on the Honey Bee," and the AMERICAN BEE JOURNAL I am indebted for many valuable hints in apiculture. Long may the JOURNAL wave! T. DUSTRUDE.

Avon, Wis.

For the American Bee Journal.

Bright Wax Sheets.

DEAR EDITOR. In the same mail with this letter, I send you a sample of sheets of wax. Some of it is pressed in a pair of rude plaster dies, by myself. This wax is quite different from the foundation on the market, being harder, not so easily melted, lighter in color and not having so much odor. It is made exclusively from white clover, being melted from caps that are shaved off in extracting. It does not get brittle by chewing; it does not stretch in cool weather, and in moderately thick sheets, the size of the sample, has stood the hot weather with very little sagging. It can be pressed in beautiful sheets for the section boxes, almost as thin as paper; and such sheets my bees have thinned out, in a number of cases, until the difference between that and natural comb is imperceptible.

I would like some information as to the qualities of wax from different parts of the country. Is it well known that the fat of animals varies in quality with the kinds of food? I suppose it is similar with the wax secreted by the honey bee.

I have tried several methods of strengthening foundation, to prevent sagging in warm weather. The most feasible appears to be to insert waxed threads, or narrow ribbons of strong, thin paper between thin sheets of wax, and then run through the machine. The sheets that I pressed in flat dies adheres well, and the bees draw out the cells without cutting out the paper.—Possibly threads might be worked in by the roller machines, by simply laying them upon the sheet of wax before running through.

I have one beautiful straight sheet of comb, in which are 4 thin strips of wood, to which the foundation was fastened. The strips of wood were put upright in a Langstroth frame, about 4 inches apart, and the foundation lapped on them and fastened with a little melted wax. It came within half an inch of the bottom bar, the strips resting upon the bottom. There could be no sagging in this case, and the comb was built out over the sticks and finished up in workmanlike order. **Wm. C. Pelham.**

Mason Co., Ky., June 1878.

[The sheets of wax are of very bright color, quite brittle, and almost odorless.—Being pressed in plaster moulds, of course the corrugations are not as perfect as those made by roller machines.—Ed.]

For the American Bee Journal.

The Standard of Excellence.

Friend Newman:—The highest standard of excellence to which Italian bees can and should be bred, according to my ideas, would be about as follows, commencing with the

Queen.—She should be a bright yellow in color, good size, with large, strong wings and legs. Her queen progeny, when reared naturally, or under the swarming impulse, should be *exact duplicates* of their mother.

The Workers should show 3 very distinct, bright golden bands. The wider the third band, the purer I think them to be.—If the dark edge on the bands can be bred off, which I think can be done, all the better. They should have large, long, tapering bodies, wings coarse and strong, and be very gentle to handle, and *Industrious.*

Drones:—Now I think we come to *one* of the *severest* and *best* tests of all. They should have 3 *wide*, golden bands, and every drone be alike, as uniform in color and markings as are the workers. When I say 3 bands, I mean that each of the 3 bands be yellow its *full width.* Merely 3 narrow, brassy streaks won't do at all. The larger we can breed the drones, the better.

Brother bee-keepers, how can we expect improvement, as long as we allow these poor, little, insignificant drones, with perhaps one and two, narrow, brassy, *hair streaks* to mate our queens? We stand in our own light, just so long as we allow it.—This is no theory with me, but practice, as my bees will show. I have made great improvement in my bees, during the last few years, and hope to see the day when every colony I have will come up to this standard, as a few I now have does.

To prevent useless correspondence, I will say that I have no queens of this kind to sell yet. Must keep them for "seed," as queen mothers, as well as mothers of those fine drones.

Will some of the knowing ones please explain through the Journal why Italian queens *do not*, and if they *should not* produce drones as even in color and markings as are the workers, when it is claimed that the drones are the true offspring of the queen, and are not affected in the least by the drone that impregnates the queen?—Gentlemen, speak out. Give us your ideas upon this matter.

My opinion is that the Italian bee is *not* a pure race at all; but I am very sure that by careful selection we can breed them up to perfection, carrying along all the good qualities, hardiness, prolificness, size, color, gentleness, &c., until finally we breed every trace of impurity out of them; then we will see one of the finest races of bees in the world, that will breed queens, workers and drones, constant in markings, color, size, &c. The majority of my queens produce beautiful workers and drones, but the queens themselves are rather dark and the drones are not as uniform as I would like them yet.

Who will be the *first* one to offer queens up to this standard? Time only will tell.—We hear of drones with "red heads" and "gray heads," and I often find them not only with "red heads," but their whole bodies red. Being of one solid color throughout, they look beautiful among the yellow workers. Hoping to see through the Journal the ideas of others on this subject, I will close. **Jos. M. Brooks.**

Elizabethtown, Ind., July 4, 1878.

[Friend Brooks sent a few of his "fancy" drones to this office. They look nice, with their "three golden bands," while living, but after death they lose their charms like all other "things terrestrial," and appear just about like "the common herd." We have some in one of our colonies that look just like them. Perhaps it *is* just about right to have the subject of "the improvement of the race" discussed now; and, if possible, let the most remote traces of impurity be rooted out, breeding this race of bees up to perfection. We fully believe that the time is not far distant when the American strains of Italian bees will be sought after the world over—for in no other country are they devoting so much attention to scientific bee culture, or the improvement of the race. Let us give the subject a *full* and free discussion.—Ed.]

For the American Bee Journal.

Rust's Excelsior Bee Hive Entrance.

I claim for this entrance as follows:

1. Its wide and easy range of adjustability.

By simply operating the wire handle, by drawing as far as possible to you, you then have it closed so that workers *only* can pass; this is to shut the drones out when too numerous. Now push ⅛ of an inch, and you close it entirely up, with but very little ventilation; this is for moving.—Push ⅛ of an inch more and you open 4 holes; this is to be used when there is danger of robbers. Push ¼ of an inch more, and you open 16 holes for general use, when not too hot nor too cold. Push ⅛ of an inch, and you have but one hole open, with half as much ventilation as when the 16 holes are open; this is used to prevent robbing in the worst cases. Push ¼ of an inch, as far now as you can, and but 2 holes are left open; this is to prevent robbing when they are not too mad.

When more ventilation than can pass through the holes is wanted, the whole entrance can be turned up enough to suit, or entirely up, so that the whole entrance in the hive is open.

2. The ease with which it is attached to any hive with open entrance like the Langstroth.

All that is necessary to fit and attach it to a hive is to measure the length it should be, and then cut the farther end from the wire off with a pair of shears. It should be ⅛ of an inch short. Bore a gimlet hole through where it wants to be, to admit the wire handle; pass the wire through the hole and drop the entrance on the bottom of the hive; now with a brad-awl bore holes for the staples, put the staples in as close as you can and allow the entrance to turn readily, and the job is done.

Fort Worth, Texas. ALBERT D. RUST.

[We have before us one of these Entrance Regulators. It is ingenious, and is well described by friend Rust. The greatest objection to it, that we can see, is its liability to prove a Guillotine for many a hapless bee. It is easily operated, and without such danger, it might be a convenient Entrance Regulator.—ED.]

Artificial Swarming.

"My bees are doing nicely, only I can't keep them from swarming. Please give us more light on artificial swarming through the JOURNAL. I have gathered a great deal of information from it, but need more. If I could have swarming under my control, I would consider bee-keeping an independent business. It is very annoying to get bees down from trees 20 or 30 ft. high, and they seem to swarm more on Sunday than any other day. The JOURNAL is always a welcome visitor here." L. Z. LANTZ.

Logan Co., O., July 1, 1878.

[Artificial swarming, or, more properly, the dividing of colonies, can be accomplished with ease. When the colony is very populous, about the middle of a warm day, take another hive of the same pattern and size of the one you wish to divide, and remove five frames, containing brood and honey, with the adhering bees, to the new hive, *being careful not to take the queen* from the old colony. Give each colony enough frames, either empty or filled with comb or comb foundation to fill it. These frames may be placed all at one side of the hive or between others, if the brood be not divided thereby. Comb foundation is very serviceable in building up such colonies, giving them room so quickly for the queen to lay her eggs or to supply honey-storing capacity.

If you have extra queens, it will be best to give the new colony a queen; or, if you have a queen cell to give them, it will be well. If neither be at hand, they will raise one from the brood supplied to them from the old hive.

When the operation is commenced, place the new hive close to the old one, giving each one-half of the old location. Then daily move them a little further apart, until they are in a suitable position.

When several colonies are to be divided, a better plan is to prepare several nuclei colonies in advance, placing them into full-sized hives, and then take a frame of brood with adhering bees from each of the old colonies, giving these frames to the nucleus colonies, and thus obtain increase without swarming.

Every beginner should procure a good Manual, and study it well, not only to master the subject theoretically, but to have authority at hand at all times to consult, whenever matters occur in the apiary with which he or she may not be practically familiar.—ED.]

For the American Bee Journal.

A Plea in Favor of the Italian Bee.

In the last number of *Gleanings* I noticed an article entitled "A plea in favor of black bees," from G. B. Peters, of Ark. It is not my intention to dispute Mr. Peters, but try to put in a plea in favor of Italian bees.

This last spring having an opportunity of buying several good strong colonies of black bees in the old-fashioned box hive, and thinking that I had better carry on the experiment of Italian *vs.* black bees further than I had hitherto done, I bought them and transferred as soon as the weather would permit. There was honey enough to last them until fruit blossom and no longer. Several of my Italians were in the same condition. When fruit blossom came these same Italians went to work with a will, stored up plenty and some to spare, while the black bees had to be fed almost as regularly as man. Now that white clover is giving way to basswood, the Italians have done remarkably well, while the blacks have collected hardly enough "to keep soul and body together." If they do no better in the future than they have in the past, I doubt very much whether they will have enough to winter on, saying nothing about leaving me out in the cold.

I also find that the Italians are at work some two hours earlier in the morning, and while all is quiet about the hives of blacks in the evening, there is a busy hum of industry about those of the Italians. The blacks are more ready to tackle man or beast than the Italians. I can go on any warm day among the Italians and work until night without the aid of smoke, but the blacks partake, to some extent, of the "dog in the manger." Smoke takes a very prominent part in their manipulation.

Early in the spring when there were no

flowers, I found the blacks lurking about the weaker swarms, and in some instances I had to stand about over the hive to keep them off and save my colony. While extracting honey last week the bees became so thick and troublesome as to drive me into the house with my work. They had gathered around the place in which I kept the cappings; so I took particular pains to notice whether there were any Italians among them. To my great surprise not a solitary Italian was to be seen, every one of them were blacks.

Disgusted! I went to every hive that contained black bees and decapitated every queen, then inserted Italian queen cells, and now live in hopes of better times in the future. I have often heard of "being sick of a bargain," now I know exactly what it means, for I am sick of this one of black bees. FISK BANGS.

North Lansing, Mich., July 11, 1878.

Adulteration of Sweets.

FRIEND NEWMAN:—Inclosed please find a copy of the petition to Congress which we would like to have you publish. You cannot insist too much on the necessity for every bee-keeper to procure a copy of the petition by sending a 1 or 2 cent stamp to cover postage, and to have it signed and returned. Such small expenses and work will be repaid over a thousand times if we can draw the adulterated sweets out of the market. CHAS. DADANT & SON.

PETITION TO CONGRESS.

To the Honorable Senate and House of Representatives of the United States:

Your petitioners respectfully represent to your honorable body:—

1. That the sweets now in use in the United States, including cane-sugar, maple-sugar, syrups, candies, jellies, honey, etc., are often adulterated with glucose, and sometimes are manufactured entirely of it.

2. That this glucose is manufactured from corn starch, by boiling the starch with sulphuric acid, (oil of vitriol), then mixing with lime. The glucose always retains more or less of sulphuric acid and lime, and sometimes it has copperas, sucrate of lime, etc.

3. That 17 specimens of common table syrups were recently examined by R. C. Kedzie, A. M., Professor of Chemistry in the Michigan State Agricultural College at Lansing. Fifteen of these proved to be made of glucose; one of the 15 contained 141 grains of sulphuric acid, (oil of vitriol), and 724 grains of lime to the gallon; and and another, *which had caused serious sickness in a whole family*, contained 72 grains of sulphuric acid, 28 grains of sulphate of iron, (copperas), and 363 grains of lime to the gallon.

4. That the American people are preeminently a sugar-eating people. The consumption of sugar, by each individual in our country, is shown by statistics to be about 40 lbs. a year. It is seen at once that the adulterators of sugars and other sweets, not only cheat our people in the quality of what they consume, since glucose contains only from 30 to 40 per cent. of sugar, but injure also the public health, by selling under false names, an article injurious to health.

5. It is as much the right and duty of Congress to enact laws against such frauds in food as it is to enact laws against frauds in money, for if the counterfeiters of money injure the public wealth, the counterfeiters of food injure the public health.

In view of the above facts, your petitioners earnestly request your honorable body to decree that the adulteration of sweets, and the sale of such adulterated products, are crimes against the people, and to enact laws for the suppression of this illegal business.

And your petitioners will ever pray.

☞ The Protective Association Against the Adulteration of Sweets, will mail copies of this Petition free to all applicants, upon the receipt of stamp. The Petition should be posted up in a conspicuous place in the Post-Office, and when filled, should be returned either to the President, CHARLES DADANT, Hamilton, Hancock County, Ill., or to the Secretary, O. CLUTE, Keokuk, Iowa.

For the American Bee Journal.

Dadant Against Himself.

"He that is first in his own cause seemeth just, but his neighbor cometh and searcheth him."

When I wrote before, I had no idea I should convince Mr. Dadant that there were hybrid bees in Italy; neither did I expect he would consent to arbitrate the matter. In the May issue of the JOURNAL he endeavors to reconcile his past with his present belief. Now let us see what influence was brought to bear to induce him to change his mind upon the subject.

When he went to Italy he believed there were hybrid bees there. Sartori confirmed him in this by informing him that Lombardy was the home of the Italian bee, and no where in Italy were the bees as pure as at Milan. Mr. Dadant corroborates this in one of his letters from Italy by saying, "Lombardy is so far the country where I saw the nicest and mildest bees." Here he used his own judgment and eyesight, as he did before he arrived at Milan, or had any conversation with Sartori, for he says in a previous letter:

"I could have bought some queens at Bellinzona, but neither the bees nor the queens pleased me. One of the queens that was shown to me was so dark that she seemed to be exactly similar to a black queen."

This course he pursued all the time he was in Italy, picking and purchasing only those he thought were pure, for in another letter he says: "I saw the bees of Varese; they are no better than those of Mona or Bellinzona. The keeper of the royal palace who was born and raised in Turin, says that the bees of Piedmont are blacker and crosser than those of Milan. Count Castralani, who is from the vicinity of Naples, told me also that the bees of Milan were more yellow than of the southern part of the peninsula." This additional testimony, with his own, is, I think, sufficient to prove that Sartori was right.

The first reason he gives for changing his mind was he found out that Sartori was only a queen dealer and bought queens from all over Italy. I cannot accept this as a reason why he broke friendship with a man whom he esteemed "very conscientious." What! did he not know that he was a queen dealer and bought queens all over the country? Let Mr. Dadant answer.

"I stay at Sartori's and take care of his bees while he is traveling to buy queens." Again, "Sartori has been out in the country during the beginning of this week hunting for queens for me."

The next reason he gives was because, "Where Sartori had told me that there were impure bees from these I received good queens." Well, what of that? Suppose I told Mr. Dadant that the bees in Ohio were purer and nicer, as a whole, than those in Illinois, would it be detrimental either to my judgment or veracity if he found a few good queens in Illinois? And would that justify him to say that all the bees in Illinois were pure? And would it be reason enough for him to cut my acquaintance and publish me through the JOURNAL? I am credibly informed that the cause of estrangement was business difficulties for the last lot of 50 queens that Mr. Dadant sent for, Sartori would not supply.

Mr. Dadant endeavors to break down the testimony I gave to prove that there were hybrid bees in Italy by saying that Nice is outside of Italy. Yes, it was ceded to France in 1860, and it was in 1855 that F. A. Deus and his three companions made a tour through the country and found black bees at Nice, then in Italy.

Again, he says, "My contradictor has now to rely on Varro, Columella, Virgil and Spinola, all writers of another era, to prove his assertion that the Italian bees are a hybrid race."

Well, if a man does not believe in *truths* and *facts* because they have been handed down to us for thousands of years, I would not give him much credit for intelligence.

I never made the assertion that the Italian bees are a hybrid race! I never thought so; and had he paid any attention to the subject, he never would have said so. It is very unfortunate for Mr. Dadant that he cannot quote correctly. Whether this is intentional, or a careless habit, I know not. I hope he will take in good part, this gentle hint.

With regard to the Italian bee, to my mind, Mr. Dadant misapprehends the whole subject. What is an Italian bee? Mr. Vogel, who, the late Samuel Wagner says, was an experienced and accomplished beekeeper and breeder, of the Province of Brandenburg, in Prussia, who has probably had more diversified, practical and experimental knowledge of it than any other apiarist, came to the conclusion, from his numerous experiments, that the Italian bee is a cross between the black and the Egyption bee.

Now cross the Italian with the black, and very soon we find queens as dark as the black. I have had queens blacker. Crossing on the black line seems to intensify the color. This is the reason why "the bees in Tyrol are black, and as cross as hybrids."

I have elsewhere stated my belief that the Italian bee was not a very well fixed variety, having, as florists would say, a great tendency "to sport." Pure Italian queens are very rare that duplicate themselves for any length of time; hence the great diversity, not only in color, but in characteristics.

This, in my way of thinking, is the whole subject in a nutshell, solving the problem why pure Italians, at times, are seemingly impure; but once crossed with the black and it will show itself for many generations. I will close this subject by saying that Mr. Dadant, in my humble judgment, has signally failed in his endeavors to break down the testimony I have given in support of my belief that there are hybrid bees in Italy.

Mr. Dadant says, (vol. 8, p. 223,) "I intend to preserve, for Mrs. E. S. Tupper and myself, all the dark queens; for we both very well *know* that the light-colored queens are *less prolific* and less vigorous than the dark."

Again he says, (vol, 14, p. 200,) "We see no difference as to *prlificness* in *dark* or *light-colored* queens." GEO. THOMPSON.

Geneva, Ill.

Swarming.

W. H. Lloyd, of Wilcox Co., Ala., gives the following as his method:

Early in Feb. he examines all his colonies, giving honey where necessary, and uniting weak or queenless colonies, if any such are found, that he may have all his colonies strong and ready to take advantage of the first opening flowers.

By the middle of March, the bees are growing quite numerous, and beginning to store a little honey, so that he finds it necessary to open the entire entrances; and as honey is his object, he sees that they have plenty of surplus room for storing, in order to keep down swarming as much as possible. But despite all his efforts, he says there will be some swarming; so that by the first of April, he is not surprised on any pleasant day to receive a message to the effect that "the bees are swarming."

In response to this message he at once repairs to the apiary and gets ready for the hiving. If they seem to be irritable, he gives the cluster a thorough sprinkling with water, sweetened with sugar or honey, waits a few minutes until they have sucked themselves full, and then finds all quiet and docile. After seeing that the hive for their reception is clean, cool and dry, he next goes to the colony from which they issued (or another will do) and selects a frame with a nice, straight comb, containing honey and uncapped brood. This he takes out, brushing back the adhering bees, and replaces it with an empty one. This frame he puts in the centre of the empty hive, covers over the tops of the frames with cloth, to confine the bees to the brood chamber, and proceeds to hive the swarm. He never damages his fruit trees by cutting off limbs, nor does he cut limbs elsewhere unless the cluster is so high as to be out of reach; but with a tin dipper or pan he dips the bees off and pours them down at the entrance, when they go in with a rush. After dipping off all he can, a little jar to dislodge the balance finishes the job. A few minutes waiting for them to get quiet and then he carries the hive to the location selected for it. All this can be done very quickly by a little experience. The frame of honey and brood will prevent the bees deserting their hive, and will secure them against want in case of bad weather. With this straight comb he also secures combs built parallel, and straight combs are of great importance in manipulating the hive.

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For the American Bee Journal.

California Items.

Editor Journal :—Bee men here must use the American Bee Journal for an interchange of their views. It is as much for the interest of the apiarist to have a special medium devoted to their wants as any of the trades or professions.

THE HONEY CROP.

Southern California bee men are now in the midst of their honey harvest ; or, perhaps, on the last half. And a pretty correct opinion can be formed of the comparative amount of honey that will be made. As much honey will be made this year as in any former year, in proportion to the amount of bees started in with ; but, the great loss of bees last year will bring the actual amount of honey put upon the market far below what it was 2 years ago.

The season has been a month later than an average one, and will continue much longer, especially along the cost. The bee feed here is almost continuous from March until October, and of the very best kind.—Some of our honey-producing plants bloom twice. The mahogany is now in bloom, to some extent, for the second time, and also the barberry. I think it makes very fine honey, but not so white as the sage.

QUEEN LAYING IN BOXES.

It is said by our bee men that there has been an unusual tendency for the bees to swarm this year, and that there has been much trouble experienced with the queens occupying the surplus boxes. I have heard it suggested that it is in consequence of its being unusually cool ; the queen chosing the top box because it is warmer. I would like to hear the opinion of some experienced bee men, through the American Bee Journal, as to the effect of the honey or division-board between the two boxes, upon the queens using the top box for a brood chamber.

EXTRACTED HONEY.

Much has been written as to the relative merits of comb and extracted honey. It is my opinion that the lovers of comb honey will adhere to their preference for comb honey just so long as extracted honey is put upon the market, slung out of uncapped combs and not evaporated. I was a little surprised, that so good authority as Prof. Cook should recommend bee men to extract their honey before it was capped, and giving no mode of ripening or bringing it to the same state as capped honey ; and as an inducement for them to do so, said that the men at the College liked it about as well as capped honey. All I can say is, there is no accounting for people's tastes !

I will admit that it is for the interest of honey-producers to extract their honey before it is capped, for it takes my bees longer to evaporate and cap their honey than it does to store it ; and during this time, they are comparatively idle. If I had no means of reducing my honey to the consistency of capped honey, I would prefer to let my bees do it, and take my chances in the market with inferior honey, than to flood it with slops, and then grumble because people would prefer comb honey to extracted.

I have so arranged my Sun Evaporator, (that some have pronounced a failure), that I can, without expense, evaporate all the water from my honey, or as much of it as is necessary. My evaporator is 5x10 ft., and 10 inches deep, covered with sky-light windows, set on an angle of one foot in three ; this will take the water off on the under side of the glass, and by springing the glass apart a little at the top, the water will run out on top of the next glass below.

I have made a simple extractor for extracting the drone brood. I uncap it the same as honey, and then throw it out. It makes good chicken feed—not foul brood, but brood for fowls.

COMB FOUNDATION.

I must add one more testimony in favor of comb foundation. We purchased a machine, and after experimenting and making other appliances that should accompany a machine, we succeeded in making good foundation. I think the makers of the machine are not explicit enough in their instructions for the use of it. Perhaps they think to detail fully what is required to manipulate it might deter some from buying.

BINGHAM'S SMOKER.

I sent for one of Bingham's Standard Smokers, and I was so disappointed in its real worth that I immediately ordered a dozen for my neighbors. Every bee man that sees it says get me one, so I have concluded to take the agency for them and keep them on hand.

RETURNING A SWARM.

The 1st of June we had a vere large swarm of bees come out; put them in a box; they immediately went to work making comb and the queen to laying eggs. The third day all came out and went on to a bush. We put them back and they have done remarkably well ever since. Rather an unusual occurrence, is it not?

THE BEE JOURLAL.

The July number of the JOURTAL has just come and is replete with many instructive articles. It of itself is worth to a bee man a year's subscription.

THE HONEY CROP.

I notice that our friend Levering thinks that the idea that a very large honey crop would be taken in Southern California was started by those wishing to run the market down for a speculative purpose. I think it is not so much that, as that the thoughtless bee men, some of whom are anxious to be known as great honey producers, exaggerate the amount they have taken out. There is no danger but that good honey will bring a fair price. That honey is falling there can be no doubt, for one of our bee men here last night had the platform under a 4,000 pound tank give way, bursting the tank and making a very sweet mess. The ants and other honey-loving insects will think they have found a bonanza.

HOW TO STRAIN EXTRACTED HONEY.

I notice an inquiry in the JOURNAL by W. C. Nutt as to how to strain extracted honey. I will describe my process: First, my honey house is two stories high, the upper floor being but a little above the level of the apiary ground. I do my extracting on the upper floor. I made two square hoppers to fit into a tin can that is about 10x10 and 14 inches deep. One I place upon brackets soldered on half way down; the other on top. These hoppers are 5 inches deep and made of perforated tin. This can I place on the floor to receive the honey from the extractor. A pipe leads from the can out doors into my evaporator. Another pipe takes the honey from the evaporator into the reservoir in the lower room. These hoppers you can call separators if it sounds any better than strainers.

LARGE *VS.* SMALL FRAMES.

I hope William H. Ware's article on the Langstroth hive will bring out the evidence pro and con upon the relative merits of the large and small frames. It is a question I have been going to ask of the old experienced bee-keepers. Perhaps what would be best for a cold climate would not be best for a climate where there is no cold weather to contend with. M. S. BAKER.

Santa Monica, Cal., July 10, 1878.

For the American Bee Journal.

Cyprian Bees.

I have a brother who raised some seedling potatoes sometime within 4 years. He succeeded in getting several varieties. One kind was early, prolific and of an excellent quality. He tried to sell out the lot to a well-known Essex county seedsman. The only fault the seedsman found with them was their close resemblance to the Early Rose potatoes, and so no sale was made.—He said that it would require a great amount of talking to make his customers believe that they were not the Eealy Rose potatoes.

Now, the Cyprian bees may, and may not be a distinct race of bees, but it will require a great amount of talking to convince bee-keepers that they are not Italian bees. I have had the Italian not far from 18 years, and when I saw the Cyprian bees, I could not tell them from the Italians, and I would like to see the man who could.

I have a friend who is now in Europe, and I am looking for 2 Cyprian queens from him by every steamer. Hope to get them so that I can have queens before September.

The Cyprian queen that I saw did not look like a pure Italian queen, as she was not yellow by any means. One little, narrow strip, back of the wings, was all the yellow color I saw about her. The worker bees were very beautiful Italians.

I write the above in reply to about 50 correspondents. The above is all I know about Cyprian bees, and I would like to see the man who knows more.

Wenham, Mass. H. ALLEY.

For the American Bee Journal.

Italians Re-producing Themselves.

It is a well-known fact that pure stock of any kind reproduces itself if increased. Black bees were pure black bees from the beginning, the queens reproducing themselves, males and all, alike. The Italians (as we have learned them) are a distinct variety, having three yellow bands. The queen, if pure, will duplicate herself, with drones and bees all alike. All we have to establish is the color, and my choice of color would be, *let the yellow be the color of gold.* Some recommend Italianizing for the purpose of infusing new blood, and I thought maybe I had overlooked a very important matter, so with my Abbott microscope and glasses on, caught a pretty Italian neuter, and to my shame went to dissecting, with head amputated and heart carved out, "nary drop" of blood was to be found; but I did find a tiny drop of that sweet nectar that helps to gladden the heart of man. A honey-eating people are a happy people. I recommend Italians for their superior beauty, their amiable disposition, their vigilance against moth, their industry in time of drouth; and last, but not least, they mind their own business. ALVAH REYNOLDS.

Oneida, Ill., July 15, 1878.

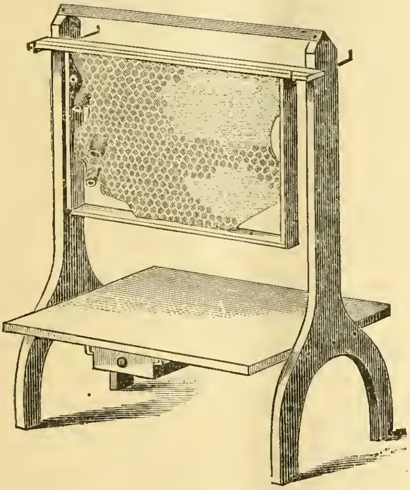
For the American Bee Journal.

Valentine's Queen Stand.

FRIEND NEWMAN:—I send you a rough drawing of a little piece of furniture I find very useful in the bee-yard. It is what I call a queen stand. The drawing will give you an idea of what it is. Something of the kind is almost indispensable. Other bee-keepers may be using something like it, or perhaps something better; but if not, they should try one. Almost any person can make it.

In examining a hive, unless there is something on which to hang the first frame removed, it must be set on the ground and leaned against the hive, and you are almost sure to mash more or less bees. In taking out queens, inserting queen cells, etc., it is just the thing.

The uprights are 1½x⅞, 24 inches high; a piece 1 inch square across the top for a handle to lift it by and to hold the top together. Two inches below the top bar are hooks on both sides, so as to hang on two frames if desirable. Four inches below the bottom of the frames (when suspended on the hooks), is a shelf 12 inches wide, to which the uprights are nailed. This makes a nice place on which to lay cages, etc. Under this shelf is a drawer 6x8, that draws out on either side, in which I keep a dozen queen cages, a sharp-pointed knife, and a small crooked-point pair of scissors. The stand is well painted, and a groove cut around the under side of the shelf, so that water cannot get into the drawer. I always have it in the bee-yard, so that any time I may wish to examine a hive, or anything of the kind, it is near at hand.



VALENTINE'S QUEEN STAND.

Last year I used a couple of hooks held together by an iron rod, and hung on the edge of the hive, to hold frames, but it did not work so well. I had no place to keep cages and tools; could not examine both sides of the comb without lifting it off.

Carlinville, Ill. J. M. VALENTINE.

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From Los Angeles Star.

Returning Queens.

As a general rule, when a queen is introduced into a new colony and accepted by her new subjects, she moves on the even tenor of her way. A new departure from this general rule recently came under our observation, when we removed a fine hybrid queen, introducing in her stead an Italian. Not wishing to decapitate her hybrid majesty, we removed her to a queenless colony, some 40 rods distant. Two weeks from that day we examined the colony in which she had been placed, but she was nowhere to be found. She had left slight evidence that the the place that once knew her, knew her no more. We then proceeded to examine the colony in which we had placed the Italian, when we were informed by the apiarist that he had removed her from the cage, dead, the following morning after her introduction. We proceeded, however, with our examination, to ascertain the condition of things; when, to our surprise, we found her hybrid majesty making her wonted rounds, and that the place that once knew her, now knew her again.

A brother apiarist informs us of a similar case in his apiary last spring. He had procured a good Italian queen, introducing her into a black colony, from which he had removed the black queen into another colony, in a distant part of the apiary, having examined his Italian queen frequently after her liberation, and in the full enjoyment of her rights. She remained in her new dominion only for a brief period, as the sequel will show, for in a few days after, on trying to find her Italian highness, he was not a little surprised to find her supplanted by the former black majesty. In order that he might not be mistaken, he examined the colony to which he removed the black queen, and found her missing.—He was able to identify her, so that there was no mistake about it.

These queens, no doubt, felt that they had been "unjustly counted out," and, without waiting for an investigation, resumed the reins of government in their former hives. N. LEVERING.

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For the American Bee Journal.

County Bee Association.

Every county, where any considerable number of bees are kept, should have an organization of those engaged in this pursuit, whereby an exchange of ideas may be effected, that new improvements may be brought out and discussed, and failures, if any, talked over, the cause ascertained and its remedy suggested, if possible, that they be not repeated.

So far as I am aware, nothing of the kind has been attempted in this part of Ohio; but, that there is need enough of it, I think is fully shown in the following description of the apiary of a prominent and wealthy farmer which I have recently visited.

A friend who is just becoming initiated into the mysteries of bee-keeping, and, perhaps, growing somewhat enthusiastic on the subject, being desirous of increasing his stock, by purchase, invited the writer to accompany him in visiting a farmer, who had signified his willingness to sell a few colonies.

A pleasant ride of 3 or 4 miles, after a busy day in the apiary, brought us to a well-kept farm and pleasant farm house, with fine out-buildings. All the surroundings indicated the careful and thrifty farmer.

My friend had informed me before setting out on the visit that there were 11 colonies, 5 of which were in one hive,—something, you may be certain, I was anxious to see. On reaching our destination, we found the owner busy, for the time being, but having been directed where to find the bees, we soon found what we took at first to be a pile of dry goods boxes, but which proved, on *close* inspection, to be the "apiary." I wish I could describe it. I can't, and do it justice.

The first hive inspected, we were told, had contained bees for 15 years. I do not doubt it. It was, probably, some patent arrangement, with glass back and door.—The door was now held in place by a piece of rail or fence stake, and the whole affair was so worm-eaten that it would hardly hold together.

We next examined an old box hive, which was being run for honey, having 2 old six-pound boxes on top, for surplus.

But, our curiosity was increasing. The next hive, said to contain 2 colonies, was a large, pine box, more than 3 feet square.—An examination of its interior arrangements showed that it contained one of the aforesaid box hives. It was explained that one colony was in the hive, and the other occupied the space outside the hive in the box; but, as there appeared to be not over a handful of bees outside the hive, the man said they must have all gone in together.—We thought so too. Another box, nearly as large as the first, said to contain 2 colonies, was passed, and we reached the one having 5. We first made an extended tour of the exterior, in search of the 5 entrances. We found them. On one side, 2 holes, an inch long and one-half an inch apart; on the opposite side, 3 holes, an inch apart, made with a small bit; all 5 opening into one and the same compartment, *viz:* that great box. Inside, in one corner, was a small box, which served as a brood nest; while outside and above it, the colony was storing its surplus honey.

What kind of bee-keeping is that? How many such bee-keepers there are all over the country. Perhaps they have not all made as much advance as this one who considered the large boxes with several colonies a great improvement. They look upon bee papers and magazines as many do upon honey—a luxury which they can do without.

I returned home well repaid for my journey, in the increased satisfaction felt as I looked upon the results of my own feeble efforts, but with a determination to do what I could to awaken an interest, which would forever do away with such bee-keeping as that I had seen. WARREN PEIRCE.

Garrettsville, Ohio, July 19, 1878.

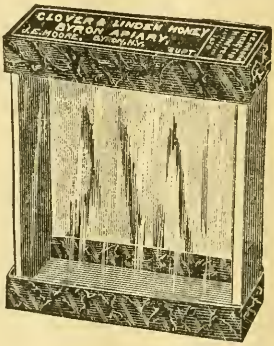
* * *

For the American Bee Journal.

The Perfection Honey Box.

I have handled bees more or less for 15 years, and made my first section boxes in 1871; but not having many bees, did not give the matter of boxes much attention. I shipped my bees here from Rochester, Pennsylvania, in July and August, 1875, and have been steadily increasing our apiary until at present we number 117 colonies, besides a number of nuclei. From the amount of time and labor required to glass up our honey in section boxes, I soon found that with many colonies I must have some more expeditious way of glassing, and better adapted to make a complete section honey box, hence my *Perfection Honey Box*, of which the above illustration gives a perspective view.

The box consists, in the combination with the comb frame or section and separate glasses, applied loosely upon the opposite faces of said frame or section, of caps at each end, which embrace the frame or section and glasses, and hold the whole in compact form. The caps are made of box pasteboard, the rim of which can be made of any desired color, although I confine myself to colors not easily fly specked.—They are made of a size to enclose one or more sections, according to size of box required, also to accommodate any size of section in use.


CLOVER & LINDEN HONEY
BYRON APIARY.
J. E. MOORE. BYRON, N.Y.
SUPT.

Some of the advantages of this box are:—The rapidity with which the honey can be glassed and prepared for market. Easy crating and safe transportation is secured. It is the most attractive style of honey box in the market.

We sold our honey last season, put up in these boxes, to Thurber & Co., New York, who spoke highly of the package.

DIRECTIONS FOR USING.

Place cap without label on bench, into which set the section or sections, as case may be; slip a glass down in place on side next operator, then grasp lower corners with both hands, pressing thumbs against rim of cap on side glass has been placed, and forefingers on opposite side of section, pressing well together; this gives room to slip glass down on other side, after which adjust cap having label on top of box.

J. E. MOORE.

Byron, Genesee Co., N. Y.

* * *

☞ In 1870 there were 70,000 bee-keepers in the United States. This year the number is estimated at 150,000, averaging 15 colonies each.

The Home of the Cyprian Bee.

In answer to many questions about the Island of Cyprus, we subjoin a condensed description of it, together with the outline of its history. As the Cyprians are now supposed by many to be "the Coming Bee," the following will be interesting to them:

Cyprus is the third largest island in the Mediterranean sea, and considerably exceeds in area both Corsica and Crete. It lies in the north-eastern basin of the Mediterranean, and is about equally distant from the Syrian and Asia Minor coasts. Its greatest length is 145 miles and greatest width 60. The width suddenly narrows in longitude 34°, from whence extends north-easterly a long narrow tongue of land for over 45 miles. A large part of the island is occupied by two mountain ranges, extending in a general direction from east to west. Between the two ranges is a broad plain, known as the Messaria, watered by two streams, but open and uncultivated. Corn is grown in some portions of the plain, and it is believed that the whole of it might be cultivated.

The renown of Cyprus extends through all ancient and modern history, the earliest things known of it dating from the Phœnicians, who inhabited the neighboring mainland and colonized the island. In historical times Greek colonies were found existing side by side with the Phœnicians, but whether they were there before or after them is unknown. Popular legend ascribe the Greek colonies to the heroic period of history, the town of Salamis having been, it was said, founded by Teucer, the brother of Ajax. The Phœnicians introduced the worship of the goddess Ashtaroth, known to the Greeks as Astarte, and identified by them with their own Aphrodite, or the Roman Venus. It is probable that the Greeks gradually obtained political supremacy, though their companions exercised an important influence on the manners, arts, and religious rites of the inhabitants. The first recorded fact in the history of this island is in Herodotus, who relates that it was conquered in the sixth century B. C. by King Amasis, of Egypt. During the invasion of Egypt by Cambyses (525 B. C.) it revolted and declared in favor of the Persians, becoming thereafter a tributary province of that empire. In the wars of Xerxes with Greece it furnished no less than 150 ships to the Persian fleet and was frequently the scene of hostilities. Its cities enjoyed a local self-government, being ruled over by petty kings, of whom there were nine on the island.

After the death of Alexander the Great the possession of Cyprus was sought for by several of his successors, and it finally passed into the hands of Ptolemy, king of Egypt. In 306 B. C. Demetrius, son of Antigonus, made an effort to recover it. He had reduced the whole of it, when Ptolemy arrived with a fleet and laid siege to the capital city of Salamis. This led to one of the most memorable naval fights in ancient history, Ptolemy being utterly defeated. This battle the reader will not, of course, confound with that great fight of Themistocles' at the island of Salamis, on the coast of Greece, near Athens, which took place nearly two hundred years earlier. Until it fell into the possession of the Romans, in 58 B. C., Cyprus had varied fortunes; but for the most part of that time it remained in the possession of the Greek rulers of Egypt. Christianity was introduced by St. Paul, and flourished until thirteen bishoprics had been established on the island. In 117 A. D. the Jews had settled there in large numbers and rose in revolt against the Roman rule, destroying, it is said, 240,000 of the inhabitants. With the division of the Roman empire, Cyprus passed into the possession of the eastern emperors, whose subject it was for more than seven centuries. During that period it was twice conquered by the Arabs, once under the reign of Haroun al Raschid, but it was recovered again each time by the Byzantine emperors.

In 1184 a nephew of the reigning sovereign at Constantinople obtained it as an independent territory, but eleven years afterward it was taken from him by Richard the Lionhearted, who gave it to Guy de Lusignan, the titular king of Jerusalem, to compensate him in a measure for the loss of the holy city. This dynasty governed Cyprus for nearly three centuries, and introduced the feudal system and other institutions of the west. Near the close of this period the Genoese became masters along the seaport towns, retaining it for a considerable period, but they were finally driven out, and the whole territory was united again under King James II. The king contracted a marriage with the famous Venetian lady, Catherine Cornaro, in order to secure the support of the republic of Venice, then in the plentitude of its power. But in a few years the king died, leaving Catherine as regent. Harrassed with jealousies, and feeling unable alone to contend with the growing power of the Turks, she abdicated in favor of Venice, and the island passed at once into the full possession of the republic. This was in 1487.

The Venetians thereafter maintained supremacy eighty years, in spite of the neighboring and warlike Turks. The story of "Othello, the Moor," dates from this period. In 1570 an army of 68,000 Turks landed on the island, but it was not until after a year's seige that the last town was captured. Of the inhabitants of the capital, 20,000 were massacred, and the governor, Bragadino, was tortured to death. Since that date the island has continued in the possession of the Turks, paying heavy tribute to the sultan, and making a history of which little can be said. Two insurrections have broken out, but both were suppressed, one of them being followed by a general massacre of the participants. During the Turkish rule the prosperity of Cyprus steadily declined. Of late years an increasing commerce between western Europe and the Levant has revived her trade in a measure, but it is a long distance yet from being what it is believed Cyprus might become—one of the richest islands in the Mediterranean.

Our Letter Box.

Noblesville, Ind., July 3, 1878.

"The queen which I spoke of last month, as not laying, was barren. She was superseded by a fertile worker, which I have got rid of, by the help of the JOURNAL.—I find it an excellent companion and *adviser*." L. M. WAINWRIGHT.

Cedar Vale, Kan., June 24, 1878.

"I never saw bees do better in any locality. I brought 8 colonies last fall from Henry Co., Ohio, on a freight car, with the rest of my goods; and with all the banging in making up trains at the various stations, they came all safely to Independence, Kansas; from there, I moved them 60 miles by wagon over a very rough road, with the loss of only 4 combs broken down and about one pint of bees. I now have 16 very strong colonies, with combs very full of honey." D. BARTGIS.

Roseville, Ill., July 1st, 1878.

"We never had such a swarming time with bees before, as we have had the past week; some colonies would swarm, time after time, and we could see no reason for it. We are getting a good deal of nice, white clover honey in small sections. We like tin separators ever so much; they cause the bees to finish each comb more quickly, and can be taken out of the hive sooner than if built without separators; consequently, the honey is very white, and straightly built in the frames. We are using a rack to hold the frames so that all can be lifted out of the hive at once, which is very handy in swarming time." MRS. L. C. AXTELL.

Camden Point, Mo. July 1st, 1878.

DEAR EDITOR.—"In bee-culture and honey-producing business I am a novice, but have learned enough to assure me that three-fourths of the learned essays and long winded paper theories are but to catch such bugs as I. One year of experience, with a sprinkle of your common sense advice is worth half the *science* extant on the subject to-day. As for patent hives, I have 9 different kinds. If I were starting anew, I would only use two kinds, the Langstroth and A. G. Hill's winter hive. Hill, in my opinion, has made a hit. I like the arrangement for wintering so well. Langstroth is a very cold hive, and great care is necessary to winter safely in this cold, 6 month's winter climate. I have 55 colonies of mixed bees. Some almost pure Italians. I have extracted as much as 90 lbs. from one hive, already. Honey dew has been very heavy this spring; indeed, it never was known to be so great in this part. I have scraped large drops from the leaves of the trees, at 3 o'clock, p. m. And as an evidence of the abundance of honey in the fields, I deliberately placed a large comb of honey on a fence post, in the middle of my apiary, and not a bee touched it for 5 hours. Such a gathering of honey, increase of bees, and a longing after a colony or two, by your neighbors, has never been seen in this country. One fellow (a granger), near here, wanted a start so badly, that he stole an old log gum, full of bees and honey, from the Hon. Jas. Anderson, and carried it a mile; but, poor fellow, he had large tacks in his boot heels, and this betrayed him and he paid rather dear for his cupidity. The Prize Boxes for surplus honey is the trick, (two sides glass;) and such beautiful white honey as I have in over 200 of them would make the Thurber Bros. smile to see it." TOM M. MOORE.

Berkshire, N. Y., June 14, 1878.

Nearly all advertisers of Italian bees claim that they are larger than the blacks, and, of course, can *smell deeper* and *sting louder* than any other bee. If the Italians are larger, it follows that the cells in the brood comb must be correspondingly larger, in order to get the advantages claimed for them. Now, what I want to know is:

1. Does "Italianizing" by simply introducing an Italian queen into a hive of black bees, get those *large* bees with the *long proboscis*? For my part, I don't see how Italians, reared in this way, can be any better than the blacks, since they are reared in the very same cells as the blacks were. I don't believe you can raise a Brahma chicken in the shell of a Bantam! In my way of thinking, the only way to get *pure* Italians, with *all* their advantages over the blacks, is to import whole colonies, and breed from them alone.

2. What is the proper distance between frames, and width of frame?

3. Will plain sheets of wax answer for guides in section boxes?

WM. C. LEONARD.

[1. Certainly, if large bees are wanted, they must be produced in large cells. Those produced in *new* comb are usually much larger than those from old comb. Give a colony a pure Italian queen and some comb foundation, and you will get nice large bees.

2. The proper distance between frames is a little less than 1½ inches—from centre to centre—about 1 7-16 of an inch; about 1 inch being sufficient for the frame.

3. Plain sheets of wax will answer for comb guides very well, but comb foundation is better.—ED.]

Napoleon, Ohio, July 6, 1878.

"The imported queen reached me safely, on the evening of the 3d inst., and is developing into a fine looking queen, and apparently a young one. She is laying, to-day, and I am very much pleased with her, so far. Bees are laying up large stores of the best quality of honey from white clover, and swarming but moderately. Basswood is not yet doing much." D. KEPLER.

Hamilton, Ill., July 3, 1878.

EDITOR JOURNAL:—"Please inform your readers that the Carniolan bees have been tried by us. We have received 3 Carniolan queens alive, on an order of 5. We found them in no way superior to the blacks." CH. DADANT & SON.

Council Grove, Kansas, July 7, 1878.

DEAR EDITOR:—I send you the stalk (in sections), leaves and flowers of a weed or plant growing thickly on a neglected field, of which the bees are very fond. They almost entirely neglect the buckwheat in bloom near by and go one-half a mile for this weed. I was wondering what they found to suit them better than the buckwheat, when I chanced to pass through this field, and the mystery was solved. I saw bees by the thousand extracting honey from the flowers of this weed. Can you tell what it is? D. P. NORTON.

[The plant is *Teucrium Canadensis*, American germander, or wood sage. Prof. Beal tells me that it is common even in this latitude. It is a mint, and thus a relative of motherwort and catnip. These latter, especially motherwort, hold out great promise to the bee-keeper. Ours have been in blossom now for many days, and even after heavy rains, of which we have had many, it would be found swarming with bees, while the mignonette, white, sweet, and alsike clover would be deserted.—A. J. COOK.]

Litiz, Lancaster Co., Pa., July 6, 1878.

"The Bee Association, of Lancaster Co., Pa., will hold its next regular meeting in Lancaster City, on the second Monday in August. We shall meet at Centre Square, at 1 o'clock, p. m., where our friends who are interested in bee-culture will be cordially welcomed. Many matters of interest will be discussed, and the meeting will, no doubt, be profitable as well as interesting.

The wet season has been somewhat unfavorable, but bees generally are doing well. Among my own bees, I have at one place 18 natural swarms from 15 colonies of bees. Others are not doing so well, but taking all things into consideration, we can not complain." P. S. REIST, *Pres't.*

Wesley, Ind., July 5, 1878.

"Bees are doing well. I never saw such a crop of white clover as there is this summer, and bees are very rich in stores of honey. I had 8 colonies in the spring; now I have 24, 2 having gone to the woods.—They are all black bees, but I want to Italianize them all next summer from the queen you are to send me." S. QUICK.

Spafford, N. Y., July 14, 1878.

"I wintered my bees successfully last winter; a part on their summer stands, and the remainder in the cellar. All came out strong, with the exception of 2 that lost their queens. April was warm, with bees apparently ready to swarm. May was wet and cold, which put them back; they destroying most of their drones. But June and July has been warm, with white clover in abundance; and now basswood is opening and they are all the time at work when it is light enough for them to see. I had 30 colonies in the spring; have had over 40 swarms from them."

EDWIN S. EDWARDS

Davis, Mich., July 8, 1878.

"The imported queen was duly received in good order. I placed a wire cloth over the shipping box and put her into a hive about 5 hours; then I liberated her. She was accepted, and is now doing a good business. I am well pleased with her."

WM. P. EVRITT.

Geneva, Ill., July 15, 1878.

"When I had to feed my bees up to the middle of June, I felt a little discouraged; but, I tell you, they are now making up for lost time. I never saw them working as well as they do now. Success to the bees and the AMERICAN BEE JOURNAL."

GEO. THOMPSON.

Strawtown, Ind., July 15, 1878.

"Our imported queen stock have outstripped everything, far or near, in gathering honey. One colony has gathered 115 lbs. of comb honey; another gave 75 lbs. and one colony. Quite a number have gathered from 75 to 80 lbs. of comb honey.—It has been a splendid season for honey.—The 'crate' is a grand success."

JOHN ROOKER.

"It is said, if we take a queen away from a colony of bees they will rear another queen. Last Friday, I took a queen from a good half colony; she had been there and laying for three weeks. There were lots of young bees crawling on the comb, eggs and larvæ in all stages, when I took the queen away. I thought I would let them raise a queen from her brood, for the bees looked so nice. The next Friday I looked to see how many cells I had. Imagine my surprise when I looked but could find no signs of any. The brood was nearly all hatched out. I thought it could not be possible that they had no queen. I put in a ripe cell, and the next day it had a queen.—The cell was uncapped as naturally as could be. Did you ever hear of the like?"

A NOVICE.

[We have never known of a queenless colony to refuse to start queen-cells, if given the opportunity. The only way we can explain the above would be to suggest that the observation was not thorough, and that a queen-cell had been overlooked.—ED.]

Grandville, O., July 18, 1878.

"Our bees are doing splendidly this season. Will get over two tons of honey in the 'Union Apiary." The 'French Pavilion' gives us up to this time 1,500 lbs. of extracted honey; 'Carpenter's Hall,' over 1,000 lbs. of extracted honey, and 'Sugarloaf Apiary' has been run mostly to small sections; about 800 lbs. thus far. I think we will find a local market for all our honey at 10 to 15 cts." W. H. SEDGWICK.

Light Street, Pa., June 20, 1878.

"Cook's Manual came to hand, and I am well pleased with it. It fills a want in bee literature that was imperative. Bees have had a very poor spring up to about a week ago, when it got warm, and now they have a plenty of white clover to work on. They got nothing from apple and cherry blossoms, on account of wet and cold, and only enough from the raspberries to live on.—Hope from now on it will prove a good season." H. H. BROWN.

Wethersfield, Conn., July 12, 1878.

"The imported queen you sent me has arrived. I introduced her and she commenced laying immediately. I am much pleased with her, she being large, active and handsome. Apparently she is A No. 1. Bees have been doing first rate for the past 14 days, working early and late. Since warm weather commenced (June 27th), it warmed them up and they have been working with full force. The indications are now very encouraging for a good yield of honey this season." F. I. SAGE.

Smith's Grove, Ky., July 8, 1878.

"We depend mostly on natural pasturage for our bees, but have growing now about one acre of melilot clover and a small patch of borage, and the bees are reveling in clover by thousands. It grows from 4 to 7 feet high, and has millions of small, white blossoms, rich with honey. It is biennial, not blooming the first season, and dies after it blooms the second season. It has no value except for honey. It blooms from the middle of June to the middle of July.—Borage blooms from July till frost. We raise turnips for early bloom for our bees, from which they gather honey and pollen, and *sometimes* sow buckwheat for late pasturage; but our crop of honey is gathered principally from the poplar and linn trees and from white clover."

N. P. ALLEN & SON.

Columbus, Kansas, July 3, 1878.

"Please name enclosed plant. Bees work on it from morning until night. It appears to grow wild on the prairie, and affords a good deal of honey, but of poor quality."

H. SCOVELL.

[This is the mountain mint, or *Pycnanthemum lanceolatum*. Another name for plants of this genus is basil. As will be seen, this is a mint, which leads me to say that our beds of motherwort and catnip are now in full bloom, and the flowers, especially of the former, seem to lose none of their attraction for the bees, even though the rains are frequent. The same is also true of the mustards, which are now crowded with bees. Brother Fisk Bangs has sown several acres of mustard, which will come into bloom about July 20th, so that he may test the quality of the honey, as also the policy of sowing this as a special plant. Our sweet clover and mignonette are now fragrant and noisy with bees. A. J. COOK.]

Waterloo, Pa., July 15, 1878.

The imported queen you sent me came to hand on the 8th inst., and is doing well. Bees in this locality are doing well—have stored more honey within the past 3 weeks than I ever knew them to do in the same time before. White clover never was better, and perhaps never continued so long. I am rearing queens more extensively, and with greater care than ever before. I have the choicest of drones and superfine breeding mothers. I would not and could not do without the BEE JOURNAL for three times its price. J. E. KEARNS.

Arkansaw, Wis., July 14, 1878.

DEAR EDITOR:—We have at present 103 colonies of bees in 4 different styles of frame hives, all doing well. Bees wintered well in this locality, coming out strong, but are not swarming any yet. Two apiaries close by us, of 23 colonies each, have not had a single swarm yet. What is the cause? Have made but little honey as yet, but seem to be doing well. We purchased 26 colonies of bees this spring in different styles of hives; had a swarm from each which are doing well; have just finished transferring. I had them in six different styles of hives but prefer the Langstroth. I intend to use such altogether next year. I found the comb foundation a present help in time of need; I used 25 lbs. with good success. This is my experience with the foundation. I have doubled my stock by its use, while my neighbors in the bee business have just as many colonies as they had when working season commenced, and no more, and in no better shape than ours are now. We are young and have a good deal to learn yet in bee culture, but thanks to your valuable BEE JOURNAL, we are none behind our bee-keeping friends here in this section. I think by the aid of your JOURNAL, I shall understand the little busy workers pretty well by the time this season is over."

JONES & STILLMAN.

Callaway Co., Mo., July 18, 1878.

"Our bees are in most excellent condition—strong in numbers and rich in stores. The early spring, and the abundant fruit bloom stimulated the rearing of an unusually large amount of brood, but the chilly weather in April and May caused them to draw on their old stores till many had to be fed, to prevent starvation. June brought the white clover with its abundance, and about June 20 the aphides made their appearance on the hickory leaves, since which we have had a copious 'honey-dew.' The insect is yet abundant, and doubtless the 'dew' will remain some time yet."

GEO. HAMILTON, M. D.

Holyoke, Mass., July 18, 1878.

FRIEND NEWMAN:—"My bees dwindled in the spring, but they have rallied their forces and are now doing well. Others report favorable. The JOURNAL comes regularly, and I hail it with joy. It is the best and greatest light we have on bee culture, bringing ideas, not only from the editor, but from all the other experienced bee men of the land. I send you herewith a small specimen from a tree that grows in this valley; it is the only one that I know of in this region. It was brought here and set out by a rich gentleman, some 25 or 30 years ago, and is now a foot through at the butt, over 30 feet high, and of beautiful form.

It is now covered with little balls or seed like the sample. I would like to know its name, and where they are procured. When in bloom, it is very fragrant and very attractive to bees, and was consequently covered with them. It remains in bloom 2 or 3 weeks." LUTHER A. TABER.

[It is basswood or linden, *Tilia Americana*. As a honey producer it has no superior.—ED.

Ragersville, Ohio, July 22, 1878.

MR. EDITOR: —As I have just started an apiary, I concluded, after looking at the various bee hives, to use the one recommended in Cook's Manual of the Apiary, which in reality is the Simplicity Bee-Hive. What I want to know is this—Has N. C. Mitchell, of Sandusky, Ohio, a patent thereon, or is his patent upon the division boards? Can I make the hive recommended in Cook's Manual, and use the division board without being prosecuted by said Mitchell?—as his advertisement is sufficient to scare a novice into fits if he makes use of said hive and division boards. By replying in the AMERICAN BEE JOURNAL you will oblige,

DR. H. J. PETERS.

[There is no patent on Prof. Cook's hive, as represented in his Manual—nor on the division boards.

N. C. Mitchell has a patent on the adjustable hive and a division board combined with rubber or cloth strips at the sides, and "lugs" at the bottom. A plain division board is neither patented nor patentable.

You need not fear trouble from any quarter for making the hive and using the division board recommended by Professor Cook.—ED.]

☞ Everybody now report comb foundation a success in every sense of the word. That with wire incorporated into it for the breeding apartment is also reported to be a success, and is advertised in this JOURNAL. We shall also fill orders for it.

HOW TO WINTER.—Those who wish to post up on the subject of wintering, will do well to read Prof. Cook's essay as read before the National Convention of 1876.—Price 15 cents.

GONE.—Another of our little squad—slowly trudging up the hill, has fallen by the wayside.

CHARLES HASTINGS, of Carlisle, Iowa, died on the morning of July 5th, 1878, in the 54th year of his age. For many years he followed our favorite pursuit in this country; and in him we lose not only a most skillful operator, but one of the fearless thinkers of the age. A man *without superstition*, in the broadest sense of the term,—has left us. Years ago, he had the reason and courage to exchange popular religion for liberty, charity, and justice. Freed from the frightful chains of superstition, he departed as serenely as the coming of dawn. Among his last words were: "I have no fears of the future."

In the broad arms of our Mother Nature, that he loved so well, we leave him to rest.

Dowagiac, Mich., July 12, 1878. JAMES HEDDON.

Business Matters.

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When ordering Extractors, give outside dimensions of frame or frames to be used, length of top-bar, width and depth of frame just under top-bar.

In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additions can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us three subscribers to THE AMERICAN BEE JOURNAL with $0.00. Premium Queens will in every case be tested, but not sent till after July 1st.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce, Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Our answer to all who ask credit is this: We sell on **small** margins, and cannot afford to take the risks of doing a credit business. If we did such a business, we should be obliged to add at least 10 to 20 per cent. more to our prices, to make up for those who would never pay, and to pay the expenses of keeping book-accounts with our customers—this we know our **Cash** customers would not think to their advantage.—This rule we must make general in order not to do injustice to any one. The cash system gives all the advantage to cash customers, while the credit system works to their injury. In justice to all we must therefore require **Cash with the order**, for all Apiarian Supplies.

Bingham's Smoker Corner

Will contain a short card from some one every month. See Bellows Smoker card on another page.

☞ It is just to say that no letters have ever been *solicited* which have been or are *now* put in this Corner, and that we have many more, from the most *conspicuous* parties, also unsolicited.

Thanking the public for their liberal patronage, which I have tried to merit,

I remain, very truly, T. F. BINGHAM.

P. S.—Parties wishing a very superior knife for uncapping, will see advertisement elsewhere.

Galesburg, Ill., July 13, 1878.

I received the smoker you sent. I am well pleased with it, and could not very well get along without it I use corn-cobs for fuel, and find them superior to anything else tried. I was called on yesterday by two parties to transfer 5 colonies that were in old box hives, and the consequence was the above orders for the Bingham smokers. As soon as men use them they see their usefulness, and, as a matter of course, must have them. H. BROWN.

Santa Monica, Cal., July 1, 1878.

J. F. BINGHAM—*Dear Sir:* On receipt of your letter and the smoker, I wrote yesterday, but had not tried the smoker when I wrote. To-day I have been trying it, and I am so disappointed in it that I thought I would write you again. Well it is a *perfect little giant*, and fills the bill to perfection. My partner had not used it one hour before he said (in his enthusiasm over it), he would not do without it for five dollars a month, and three or four bee men have already seen it, and all want one as soon as I can get them. So you may send me one dozen—half standard and half large size. They are in so much of a hurry that I did think of telegraphing for them, but thought that would take off the profit. I think I can sell one to every bee man I show it to, but they must see it work before they will be satisfied, for there are so many humbugs, and it is so easy to get recommendations for anything. Yours truly,

M. S. BAKER.

CHIPS FROM SWEET HOME.—Mrs. P. says: "Palmer, here's your smoker." "All right," says I. Fifteen years ago I used rags, thought they were good; eight years ago I found rotten or dozy wood excellent, and to it we hung, thinking that we wanted nothing better, although I did nearly burn up 2 colonies; it was dangerous, for buildings as well as hives might be burned up; it smoked my eyes, making the water run at times freely. I used to make myself dizzy, till I learned how to blow. But rotten wood was good, I had used it for years. Last season I did think that I would get a smoker this spring, but seeing Lock using one, and it was used to such a poor advantage, that I concluded rotten wood was best. Two of my neighbors having bought lately, I concluded to try one, for they said they would not be without one if it cost $5. Their's was Bingham's smoker. As soon as I got a bunch of bees *barreled*—not hived, for I put them in 2 barrels, for there were 9 swarms in that pile—I set the smoker going, and soon Mrs. Sweet Home says: "How do you like your smoker?" I answer: "Ten times as well as I expected. I can work much faster, easier and pleasanter. Italian bees, double-entrance Langstroth hive, prize box sections, separators, glass, extractor, foundation and a Bingham smoker, makes beesness!" Send me 4 more. D. D. PALMER.

Wethersfield, Conn., July 12, 1878.

T. F. BINGHAM, ESQ.—*Dear Sir:* A little over one year ago I bought of es "Square" Newman one of your small smokers. I have used it in transferring over 100 colonies of bees, and for months have had it in use daily in my bee yard, some days using it 8 to 12 hours. I have used other smokers, but much prefer yours. Still, I have made a great improvement on them: I should make it exactly like yours, or at least retain all its important features, and would paint them red, white and blue, and, notwithstanding the paint might be a disadvantage, I would *call* it an improvement, and would then like to see the man who would dare say I was not a public benefactor.

Respectfully yours, F. I. SAGE.

In justice to A. J. King, I would say that since the issue of my patent, he has not made or sold Bingham smokers to my knowledge. T. F. BINGHAM.

Los Angeles, Cal., July 12, 1878.

Bingham smoker received, and been in use nearly every day since, I endorse all said in its favor. It effectually prevents the danger of fire in the apiary.

Respectfully, WM. MUTH-RASMUSSEN.

Mohawk, N. Y., 20th December, 1877.

MR. T. F. BINGHAM—*Dear Sir:* Inasmuch as others who have so voluntarily considered the smoker matter, have so thoroughly ventilated the same without any marked interference from you or myself, I decide to come to you with the matter, and mention some points that are of marked interest to me. As you are well aware, the smoker cost our family much money and labor before it came to the public in anything like practical form. As is ever the case, the placing the first imperfect article upon the market, injured the sale of the better ones that followed. Father Quinby was urged more than you can know to patent the invention, but with his views of the matter, he could not be induced to do so. You are, of course, aware that if the connecting the upright tube to the hand-bellows had been patented by him, he would have had the control of the smoker. In the cut-off between the bellows and tube, you have given the smoker a marked improvement.

Through father Q.'s interest in the cause he loved, you have had the main features of the smoker handed to you. In the manufacture of smokers for another season, I desire to use the direct draft. In form I do not desire to copy your smoker. I am told you have applied for a patent. Is this the case? Whether so or not, I am controlled by a different motive than man-made law. I am not inclined to play "King" in the matter.

Please let me hear from you at once, giving me your views freely. Yours, resp'y, L. C. ROOT.

Honey Markets.

NEW YORK.

There is no change in the condition of the market during the past month, and prices are still quotable as follows:

Buckwheat Honey—comb	8 to 12c
Strained or extracted	8 to 10c
Clover—in comb	15 to 25c
" extra	8 to 12c

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY.—The current quotations for good to choice comb, are ranging at 12 to 15c. ℔ lb; common and dark colored lots at 8 to 10c. and choice extracted honey at 7 to 9c.

BEESWAX.—In fair request at 24 to 26c. per lb. for prime choice yellow.

CINCINNATI.

COMB HONEY—In small boxes, 12@15c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz,, $4.50; per gross, $50.00.

C. F. MUTH.

CALIFORNIA.

HONEY.—With the loading of wheat ships for European ports, honey moves. Buyers for those ports pay 6@6½c. for the best extracted, which seems at present to be their limit. Our market to-day we we quote as follows: Comb, white, 11@13c.; comb, dark to medium, 8@11c.; extracted, 6@7c.

BEESWAX.—26@28c.

STEARNS & SMITH, 423 Front St., San Francisco, Cal.

New Quinby Smoker Column.

It is but just to call the attention of bee-keepers to the fact that those who compare the Quinby with the Bingham Smoker, refer to the last year's Smoker, and not the better one I am selling the present season. See advertisement in another column.

L. C. ROOT.

Canajoharie, N. Y., July 17, 1878.

After selling a large number of your smokers, we are gratified to know that they give general satisfaction. We keep all the prominent styles in stock, and whenever a visitor buys one, he always selects the New Quinby in preference to any other.

J. H. NELLIS.

Wenham, Mass., July 10, 1878.

I have thoroughly tested the smoker. It works like a *charm*. Everything about it is perfect. They are made in a thorough and workman-like manner. I consider it the best smoker in use. H. ALLEY.

THE AMERICAN
BEE JOURNAL
Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, SEPTEMBER, 1878. No. 9.

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Editor's Table.

BEAUTY SPOTS.—From the Rev. A. Salisbury we have received a beautiful Italian queen, with three spots on her back ; the one on the tip of the body rather obscure in the dark rings, so common on queens. Her progeny are really beautiful to look upon, and she is exceedingly strong and prolific. Friend Salisbury has some of the very choicest stock, and this is one of his best.

* * *

☞ Through the kindness of Messrs. Thurber & Co., of New York, we have a copy of a "Manual of the Apiary," in Italian, by Luigi Sartori, of Milano. It contains 530 pages, and has many useful items which we shall translate and publish in the JOURNAL from time to time. It contains, among other things, many receipts for manufacturing articles with honey, such as confectionery, &c.

Also from M. Hamit, editor of *L'Apiculteur*, of Paris, a Bee Dress, made of steel wire and cloth ; added to our museum.

* * *

☞ On the night of Monday, Aug. 19, some vile wretches wantonly mutilated and destroyed 51 colonies of bees, belonging to Mr. George Grimm, son of the late Adam Grimm, of Jefferson, Wis. The hives were discovered next morning tipped over, and many of them smashed up, and the colonies ruined. Mr. Grimm was absent from home ; his uncle, Christopher Grimm, took care of the bees, doing the best he could to repair the damage, and offers a reward of $100 for the conviction of the miscreants.—It would have been well had they been caught in "man traps," and left to the mercy of the bees themselves. We fancy they would have seen chain-lightning—lots of it—and would never have wanted to disturb bees again.

Queens Duplicating Themselves.

This subject should now be thoroughly discussed, tested, and settled. Friend Moon has sent us the following proposition, which should be accepted by those who claim that pure queens will invariably duplicate themselves in their queen progeny. Friend Moon says:

Rome, Ga., Aug. 14, 1878.

Our remarks in the AMERICAN BEE JOURNAL for August, about queens duplicating themselves as to color, in their queen progeny, has caused quite a sensation with some queen-breeders. They have written us that they have queens that will duplicate themselves every time in their queen progeny. Mr. Editor, its barely possible that they have some of friend Gravenhorst's "Princesses." We certainly hope so. While we claim to breed the Italian bee in all its purity, and as fine as are raised in this country, we must confess, that if any of our friends have got such queens, they are certainly ahead of us.—We were once taught that "it is not all gold that glitters;" so we think of queen rearing. We will now make the following proposition:

To the person who will send to the Editor of the AMERICAN BEE JOURNAL a pure Italian queen, that will duplicate herself every time, as to color in her queen progeny—we will send two good colonies of pure Italian bees.

THE TEST.

The Editor, to whom the queens are to be sent, shall raise twelve queens from the queen sent, and in case the twelve are all of a uniform color, a *fac simile* of their mother,—the person sending such queen shall receive, from us, two pure colonies of Italian bees.

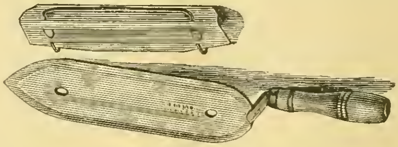
In case they are not all alike and of uniform color, the one accepting the challenge shall send to the Editor, for his trouble, five pure, tested queens. Let those who have these princesses now come to the front, or haul in their flags. A. F. MOON.

☞ At the Burlington Convention we were awarded a "Cyprian" queen, to be sent us by Mr. Haines. He sent four—three were received dead and returned, and the one that was received alive is a vile "hybrid," which we also returned; her presence in our apiary was offensive—all else being pure. She was of fine appearance, and in last month's JOURNAL we called her "Italian," assuming her "innocent till proved guilty" by her progeny.—If Mr. Haines has any pure stock, we have yet to learn the fact. We have received many complaints of the vile trash he is sending out. A mistake may sometimes be made by the best of us, but we fear the greatest *mistake* yet made, was to give credence to any of his statements.

☞ The Minnesota State Agricultural Society will hold their Twentieth Annual Fair at Saint Paul, on September 2d, 3d, 4, 5th, 6th, and 7th. We acknowledge an invitation to be present, but shall not be able to attend. We hope honey-producers will have a good Honey Show there.

☞ Friend W. H. Ware, of Bayou Goula, La., suggests that the time for Reports to be sent in for the South, should be extended to Dec. 1st, so as to include the year's business in that region. Accordingly, we extend the time for the Southern States to Nov. 15th, when we hope full reports will be sent in.

☞ Bingham and Hetherington have made an addition to their Honey Knives.—It consists of a tin back, fastened to the Knife by a wire clasp hitching into the holes, as seen in the cut. This movable-back is intended to hold all the cappings on the knife, and is to be used by those who lay the comb flat on a table when uncapping. Others can take it off in an instant and use it without. We have just been using it, and find that it works like a charm. The beveled edges facilitate the use of the Knife, and are quite an advantage, saving both time and labor.



☞ By the *Bee-Keepers' Magazine* for August, we learn that friend A. J. King's health is still very poor. So much so that he is unable to attend to business. He remarks that the business of the office he has placed into good hands. We hope he will soon recover.

☞ Friend Martin's small honey package, advertised on another page, is a nice thing—and will sell lots of honey to children. It is a novelty—and a blessing at the same time, as it gives the children healthy sweets in place of the poisonous candy sold by confectioners.

☞ The Sorrento Saw for attaching to any sewing machine, advertised in another column, is a nice thing, and may be seen in our Museum.

Our National Convention.

One fact that stands out conspicuously upon the threshold of our honey interests, and confronts us with its importance, if we wish to open the eyes of the world to the superiority of our product, is the marketable shape of our packages, and the general advantages of an American market. We should patronize our National Convention more, and encourage the Honey Show established in connection with it, in every possible way.

We should never permit another opportunity like the present Paris Exposition to escape us, without exhibiting to the world the wonderful perfection of our system of management, the excellence of our honey, and the great resources of our country.

We call particular attention to the following notice by the Executive Committee calling the Convention:

Executive Committee of the National Bee-Keepers' Convention, P. O. Box 3895, N. Y.

To the Bee-Keepers of the United States:

We respectfully invite your aid and co-operation in enlarging this organization, until it shall include in its membership the name of every honey-producer and other person interested in the development of this great industry. Every trade, occupation, profession, or industry in the literary, moral, or material pursuits of life has its guild, union, or association, whose purpose it is to foster the interests of the class they represent, and these organizations have been found powerful and efficient agents. The honey interests of this country are co-extensive with our land and employ thousands of laborers, requiring for its development a large amount of capital, and forms the basis of prosperity for a large circle of people, and by effective organization its improvement can be greatly fostered and maintained. A large class of bee-keepers in the United States have been standing still in bee-matters while others have moved on and produced a greater abundance and at a less cost. By organization we are better able to disseminate accurate information concerning the crops, the best methods of cultivation, the latest improvements in hives and implements, and their effectiveness, and can advertise our products, and impress upon the world the magnitude and importance of the pursuit we follow. The printed reports of these gatherings, published as they are in the leading periodicals of the land, are powerful public instructors, and in no other way can we secure this great assistance so well as by organization. The representative system would place our National Association on a firm basis and develop its usefulness exceedingly. We hope to secure a large attendance of delegates from local organizations. These delegates can easily be sent if the societies will bear a portion of their expenses. Please give this matter prompt and hearty attention.

The annual convention of the National Bee-Keepers' Association will be held in the Cooper Union, New York City, commencing 12 m. on Tuesday, the 8th of October, 1878.

The exhibition of bees and their products will be held at the American Institute. All exhibits intended for this show should be directed to the National Bee-Keepers' Association, care H. K. & and F. B. Thurber & Co., N. Y., who will receive and place them in position. Although we have been granted liberal space, we have reason to think every inch will be occupied; therefore applications for room should be forwarded at once to the Executive Committee of the National Bee-Keepers' Association, P. O. Box 3895, New York City. No applications for space will be received after September 20, 1878. Bee-keepers who cannot attend in person will please forward us all the interesting information they can at once. Working bees can be exhibited, and arrangements made for their flight. Answers will be cheerfully given to specific inquiries.

Respectfully,
EXECUTIVE COMMITTEE,
Bee-Keepers' National Convention.

We would suggest that, this fall, everything calculated to interest, not only bee-keepers, but the great outside world, in our branch of industry, be contributed to the National Convention. To bring up prices, every outlet for our honey must be cultivated, and every method of advertisement taken advantage of. Petty prejudices should be sunk and the hearty co-operation of all honey-producers given to this enterprise. Bees and their products, in every conceivable shape and style should be shown; photographs of apiaries and leading bee-men, as well as various kinds of models, observation hives, &c., will add largely to the interest and appearance.

We understand that ample provision will be made for exhibiting all such things; and we have no doubt that the exhibition of honey and attending the Convention and honey show will attract a great many apiarists to New York, this season. We understand that there will be no medal offered, but a very beautiful recognition in the shape of a diploma will be awarded to meritorious exhibits.

Bee-Keeping in England.

We are exceedingly pleased to notice the rapid strides that are being made in England towards a degree of perfection heretofore undreamed of, for stately Old England, in the scientific management of bees. That excellent periodical, *The British Bee-Journal* fairly bristles with the subject of advancement in bee-culture, and rational and scientific management. Bee and Honey Shows are abounding in almost every county, while the National Society, called the "*British Bee-Keepers' Association*," shows a wonderful state of prosperity. Its lady President, the liberal and very popular Baroness Burdett Coutts, has subscribed $125.00, and its energetic honorary Secretary, the Rev. Herbert R. Peel, has subscribed $100.00 towards defraying the expenses of the Honey Show, which took place last month, in the Royal Horticultural Gardens, at South Kensington, London. All England seems to be *alive* on the subject of "How to produce the best honey in the most marketable shape." The present number of members of its National Society is about 160, and the plan adopted as to membership is quite interesting. It presents a key to financial "success," as well as how to get up an interest in bee-culture that cannot fail of being abiding. It is this :

Those members whose annual subscription is $5 and over, are eligible for election on the Board of Directors or Managing Committee, while all others are entitled to one vote in such election, for every dollar subscribed.

They have a tent erected, and in it the various manipulations of the apiary are performed competitively.—A circle of twenty feet in diameter in the centre being devoted to the manipulations, while a promenade of six feet wide, encircling it, is reserved for visitors. This presents an idea for our National Society to think about—something that will give it an impetus, heretofore unheard of.

These manipulations are just the thing to create an interest, to bring together not only the experts, but those who need instruction in scientific management.

We feel assured of this, by the experience of the past year, in the apiary of the AMERICAN BEE JOURNAL, in this city. How often do we find one of the greatest attractions for our visitors to be allowed to witness manipulations with our bees ! Some have had but a limited experience with Italians ; others as limited an experience with the manipulations of the apiary, especially upon scientific principles. And often, as they retire, do they say—"It has been the greatest treat of my life. I am delighted with what I have witnessed in the apiary, as well as in the Museum of modern appliances."

We do hope our National Society will, at the next meeting, take advance ground and either foster, encourage or inaugurate an Exhibition, not only of apiarian implements and honey, but also of manipulations with bees. Officers with energy and ability to manage can easily be secured, who will make the Honey and Bee Show a success, from its very inception. It *can* be done, and, we think all will say, it *ought* to be done.

Would it not be well for the National Society to offer medals as prizes, to be awarded at the Honey and Bee Shows of the different State and District Associations within its limits ?

What do bee-keepers say about these crude thoughts ? We shall esteem it a favor if those interested will, within the next 10 days, send us their opinion. Being Secretary of the National Society, we will collect, classify and present them to the Society at their meeting next month, and endeavor to have the Society inaugurate some good, *practical* work, in this direction. We hope to obtain hundreds of responses to this request within the next ten or fifteen days. What is done must now be done quickly. If our ideas are of any value, back them up—if not, kindly show us the "more excellent way."—This we ask, especially as we desire the welfare of the Association and the advancement of bee-culture.

Honey.—The *Baltimorean*, of Baltimore, Md., reviews our pamphlet on Honey, and after enumerating the contents, adds: "We learn from this pamphlet much about honey which it would be well for mankind generally to know. Pure honey should be always freely used in every family, and honey eaten upon wheat bread is very beneficial to health." The *Baltimorean* is right—it WOULD be well for mankind in general to know it; and thus save much of the sickness and suffering now prevalent in the world.

Angered Bees.—G. Henderson, of Ealing, England, gives the following instance of bees wreaking vengeance on an innocent hen and seven chickens, for supposed injury to their hive. In the *British Bee Journal* for July, he says:

> "On returning home about mid-day, a short time ago, I was informed that my bees had, during the morning, been guilty of a sad misdemeanor. A hen with seven, fine, healthy chickens, under a coop, had been placed within two yards of one of my hives. Suddenly the bees had rushed out and attacked their unoffending neighbors, stinging them most mercilessly. The hen and chicks were at once taken into the house, but although every care was taken to remove the stings, &c., six of the chickens succumbed in a very short time; the seventh, being at the time, I presume, under the sheltering wing of its mother, had not been touched.—The hen-mother was a sad sight, her head and neck were literally bristling with stings, and her eyes closed up.—She seemed to suffer much pain, and for two days was unable to eat; on the third day one eye opened, and on the fourth the other. After that, she gradually threw off the effects of the virus, and at the end of the week she was herself again. I had no difficulty, on opening the hive that was next the coop, in discovering the cause of this fierce onslaught. A bar, which barely reached the sides of a super, had fallen into the midst of the astonished bees, and they, fancying their domicile had been attacked, had rushed out with a full and fell purpose of wreaking vengeance on their disturbers. The punishment inflicted was indeed short, sharp, and decisive; but, as is too often the case with higher-reasoned beings, the innocent suffered for the guilty."

Artificial.—Newton, seeing a falling apple, asked, *why?* Franklin, upon witnessing the lightning's flash, asked, *why?* Fulton, perceiving the force contained in steam, asked, *why?*—Thousands of scientific discoveries have resulted from some one asking *why?* When we hear persons call Comb Foundation "artificial," we naturally ask, *why?* Artificial is "*un*natural," "fraudulent," an "imitation!" What is there *un*natural about Comb Foundation? Is the wax *un*natural? Does melting, and dipping a board in it, make it a fraud? Does peeling off the cooling sheet of wax from the board make it an "imitation?" Or running it between rollers, pressing configurations into it, make it unnatural? If so, why do the bees take to it so naturally, instantly siezing it, building it out into beautiful cells, in which to raise their brood or store their honey? Is not everything genuine, natural and real? Then *why*, in the name of common sense, should it be called "artificial?" We much prefer the real, the natural, the genuine, be it ever so plain, to the gilded fraud, or the elegant imitation! Don't you? Let all ask, *why?* An honest doubt often leads to greater truth!

☞ That "floating apiary" of Mr. C. O. Perrine's has passed St. Louis and is making its way north. The season was much earlier than usual in the North this year, and Mr. P. did not start till May 13th, six weeks after he intended, so that it has not really had a "fair show," though Mr. P. says he is well satisfied with the result, and intends to prosecute it with increasing vigor, next season. It is pluck that wins, usually.

Shipping Goods by Express.

DEAR EDITOR:—Is it not strange, in this enlightened age, with the facilities for getting information in regard to the rates charged for shipping by freight or express, that there are so many that order goods and direct how to ship them, and then, because they think the charges too high, will not take them? I lately received an order from Kansas for 15 bee-hives, complete. The money was sent with order, with instructions to send by express immediately. I did so by the next express, but I had to guarantee the charges, and on receipt of the hives the charges were so high that the party ordering them refused to take them, and I have had to pay charges and hold the hives, and he loses the money sent for them. The charges were $30.90 ! ! R. R. MURPHY.

It is very often that those who live in the country have no idea of how exorbitant the express charges become for long distances. We lately received two hives by express on which the charges were $3.50—about as much as they were worth. Those ordering goods should order early enough for them to be sent by freight, and that would save all the trouble. Freight charges are usually light—extremely so when compared with express charges. A bee-keeper who was visiting our Museum a few days since, made this wise remark: "I never wait till I want anything before ordering. I always send in advance, and then have it ready for use when desired."

☞ Quite a number of very interesting Honey Shows have been held by the British Bee-Keepers this year. We notice a list of eighteen Honey Shows in one number of the *British Bee Journal*, held at different places in England. Prizes were offered for the best Bees, Hives, Honey, Boxes, &c., ranging from "one guinea" to "half-a-crown!" Here is a lesson we must learn. We must take more interest in Honey Shows, and encourage them.—It will be vastly to our advantage to do so.

BEE-HIVING EXTRAORDINARY.—The Cedar Rapids (Iowa) *Times* notices the fact that a swarm of bees were in the air over one of the streets of that city, and a man provided himself with a bush for the accommodation of the swarm when they came down. And come down they did, but preferred lighting on the man who held the bush rather than on the bush itself. The bees covered his head, shoulders, back and breast as a swarm of bees only could cover a man. He stood like a statue, and when the swarm was well settled, he extended his arms, the bystanders pulled off his coat, shook the bees into the hive, scooped them gently off his head, face and neck, and the entire swarm was captured and cared for. The men and boys were almost as numerous as the swarm of bees, and no doubt they were as much astonished as were the bystanders when Paul handled the viper in days of yore.

BEES AND THE MAILS.—The late "instructions" from the Postmaster General have put a *quietus* on sending queens by mail—nearly ruining the "dollar queen" business. If this were the *only* "inconvenience," we should not regret it—for such stock ought not to be sent over the country either by mail, or in fact by any other means of conveyance. The exact wording of the "instructions" in question will be interesting to some, and so we give it in full:

> Your attention is called to the following instructions from the General Superintendent, viz:
>
> *Post Office Department, Office 1st Ass't P. M. Gen'l,*
> Washington, D. C., July 13th. '78.
>
> SIR: Referring to the correspondence submitted by you to this office, under date of the 10th inst., I have to say that bees are held by this department to be unmailable matter, and employees of the railway mail service, as well as postmasters, should refuse to receive them for mailing; but when packages containing bees are found in the mail car, the employee in charge thereof should deposit the same at the terminal office of his run, and the postmaster thereat should notify the party addressed, by letter. that such package is held subject to his order, and that the same will be forwarded at the expense of such party, by such means as he may indicate other than the mails. Very respectfully,
>
> (Signed,) JAMES H. MARR,
> Act'g 1st Ass't P. M. Gen'l.
>
> Hon. Theo. N. Vail, Gen'l Supt. R. M. S., Present.

☞ J. S. Harbison, Esq., the great Bee-King of California, and C. J. Fox, Esq., the President of the San Diego Bee-Keepers' Association, will send a joint communication to the National Convention on the subject of "Bee-Keeping in California." It will no doubt be a very interesting paper.

☞ A private letter from California states that the honey crop of this year will be about two-thirds as much as in 1876. In July the white sage yielded abundantly, and the flavor of the new honey is said to be excellent.

California Honey Crop.

Knowing that our readers not only in the West but also in the East, will be interested to get facts, relative to the California honey crop, we give place to the following extract from a letter from Mr. J. S. Harbison, the bee-king of California, who has already sent several car-loads of honey to New York :

"I am now satisfied that the product of this county (San Diego) will be in the vicinity of 15,000 cases of comb, and extracted enough to run the aggregate up to 1,000,000 lbs. If reports from the four counties outside are to be relied on, the yield will fall materially below that of 1876, say one-third.—The above is the nearest approach to quantity this year that can be arrived at until the crop is forwarded for market. I cannot give any estimate of the amount required for this coast. There will be heavy shipments of extracted honey by grain ships to Europe. The volume of the white sage honey has not yet begun to arrive from apiaries.

The extracted honey is nearly all being put up in pine barrels, weighing about 300 lbs. gross weight; 6 cents for good to prime, in bbls. as above, is now the price with merchants here ; I look for lower rates soon."

Relative to improvements in packing honey, the San Diego *Union* remarks as follows :

"Letters received here last winter from Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, and from Thurber & Co., of New York, advised our Bee-keepers' Association to pack their honey in "small, neat, attractive cases," in order to compete with those used in the East, and recommend the use of the "Prize Box." The President of the Association was requested to correspond further on the subject, and in doing so, had sent to him by mail a sample "Prize Box." This was found to be unsuited to our requirements, as it needed glass, and the cost and risk of breakage would be too great. Setting his wits to work, the President, Mr. Chas. J. Fox, invented a sliding lid, placed in each side of the box, the use of which enabled the dealer to exhibit the honey without taking off the lids of the boxes, even when they are piled up several tiers high. We saw a sample box to be sent by mail to Chicago, to show the dealers there in what a neat and attractive shape our producers can put up their honey. They have before acknowledged that our honey could not be beaten for quality ; and now they will find we are not going to be behind the times in putting it up for sale.

Mr. Fox, who seems to be quite an enthusiast in the business, has corresponded a good deal all over the world, and made several suggestions and improvements of considerable value to our bee-keepers."

☞ Our brethren of the press are constantly placing us under renewed obligations, for the very kind but unsolicited notices they are giving the AMERICAN BEE JOURNAL. Though they are fully appreciated, we could not copy them all. The following, from the *American Grocer*, of New York, is but a sample of the many.—As heretofore, we shall endeavor to further *all* the interests of the honey-producers of America, and make the BEE JOURNAL so interesting and valuable to them, that no one who is interested in Bees or Honey will willingly do without it. If this course shall bring us the approbation of good men, as well as the praises of the Press of this Continent, we shall be amply paid. Here is the notice of the *Grocer :*

"AMERICAN BEE JOURNAL.—We recognize the fact that this journal is pre-eminently above all its competitors, that it is full of fire, enterprise and vim ; that it discusses the various questions pertaining to bee-culture with spirit and energetic thought ; that it is an honor to its Editor and to the interest which sustains it. It has no individual axe to grind, but it is the fearless champion of all that is useful and good ; steadfast, unwavering, honest ; never vacillating or swerving, but true as the needle to the pole to the interest of bee-keepers. It should be taken and supported by every one interested in bees or honey.—As an advertising medium, for reaching an enterprising, thrifty class of farmers, such as bee-keepers always are, it certainly *has no equal.*"

Cook's Manual of the Apiary.

The following is what the Press has said about the above book this month:

"Treating the art in all its different branches in a clear, concise and interesting manner, showing the author's thorough knowledge of the subject on which he writes."—*The Canadian Entomologist.*

"This volume must rank with Henderson's manuals, and share with them the praise of being an indispensable adjunct to every specialist's library, and to every beginner and person interested in bees. It is a scientific book, a practical book, a book of 'how to do' and 'why to do,' tersely written, yet fully expressed ; a book for the people ; a book to the credit of American literature. The printing is well done. the illustrations are of fine order, the binding is attractive."—*Scientific Farmer*, Boston.

Marketing Honey.

This department will be devoted to items of interest concerning Packing, Selling and Shipping Honey and Beeswax.

☞ Stair & Kendal, of Cleveland, O., reports that the finest, whitest comb honey is selling there at 16c.

◆

☞ Nice, white comb honey, in single-comb sections, is selling in Boston, at 16c. per pound. Extracted at 8c. and 9c. per pound.

◆

☞ We learn that friend G. M. Doolittle has 5830 pounds of extra white honey this season, and friend Betsinger about 3000 pounds of the same kind.

◆

☞ Thurber & Co., of New York, have received one car load each of extracted and comb honey from Cuba, and sold most of the comb honey at 17c. to 18c. The extracted is thin and unripe, causing the cans to puff and burst; this was sold at 8 and 9c. per pound.

◆

☞ In England, extracted honey is worth, at least, 25 cents per pound, and the *British Bee Journal* for July, assures us that "if it is very choice, it will realize more." Therefore, to export our excellent honey to that beautiful "Isle of the Sea" is a happy thought—and one which will pay well to practice.

◆

☞ A progressive Californian writes that he is putting up his honey in crates similar to the "Prize Crate," but having "a sliding lid to cover the opening on each side, thus saving glass, and at the same time protecting the honey, giving equally good facility for inspection without opening the crate." We are glad to see that this crate is adopted as a standard. It will help to bring about the much-needed reform in the boxes heretofore used. The substituting of a slide of wood for glass is a good idea for such a long journey.

◆

☞ Voigt, Mahood & Co., of Pittsburg, have received a car-load of California comb honey, and sold it out at 16c. per pound.

◆

☞ From W. D. Parker & Co., we have a sample of very nice and smooth dovetailed sections. They are made of whitewood, smooth on all sides, and are handsome in appearance. The section to hold one pound of honey weighs less than one ounce.

◆

☞ The United States pays annually to other countries $100,000,000 for sugar and molasses. If the true value of honey were generally understood, much of this enormous sum could be kept at home, greatly augmenting the wealth of the country, as well as giving health and happiness to thousands who now suffer with diseases of the chest and lungs, and adding years to the lives of the weak and suffering everywhere.

◆

☞ A bee-keeper who had his surplus boxes made at home, wrote us to send him a lot of crates for them—stating that they were the "Prize Boxes." In a few days back they came, saying they would not fit his boxes and were useless. On receipt of one of his boxes we were not surprised to find that they would not fit. The prize box is 2 inches deep—his was 2½ inches; the prize box is 6¼ inches high, his was 5½ inches; the prize box is 5¼ inches wide, his was 6½. The moral is—if you don't know just what the prize box is, send and get one before you get boxes made—for it will be the standard hereafter. It will save time, trouble, annoyance and expense.

◆

☞ This month promises to be a busy one for bees. The buckwheat yield will be large, and golden rods and fall flowers promise a good yield. Get all the box honey possible, for it sells much more readily than extracted. "Keep all colonies strong," is the best of advice; uniting or strengthening with a frame of brood when necessary to do so.

Foreign Notes.

Foreign Items,

GLEANED BY FRANK BENTON.

HONEY VINEGAR.—Stir together a half pound of honey and a quart of water, permitting the whole to boil while mixing it; then expose it to the rays of the sun, covering with light muslin to prevent insects from getting in, and in 6 weeks it will become excellent vinegar, quite as good flavored as that made from wine.

DO QUEENS LAY DRONE OR WORKER EGGS AT WILL?—In reference to this point, Herr Thormann gives, in *Deutscher Bienenfreund*, the following information: "During the past two years I have been making experiments with the view of breeding larger workers; and to this end I have obliged queens to lay worker-eggs in drone cells. At the present time there can be seen in my apiary a colony that was wintered on 7 drone combs, 4 of which now have brood in them; no drone-brood, but worker-brood in drone-cells."

ROTARY BEE-HIVE.—A German agricultural journal has a long description, with 7 illustrations of O. Freiwirth's Rotary Bee-Hive. To a Yankee bee-keeper the affair would look very much like a cheese-box standing on one of its flat sides, having a post through the center, attached to which, at a little distance from the bottom, is a disk; through an opening in the circular side the frames are slipped in until they touch the center-post, the latter, with the disk, being revolvable. The inventor claims that "with closed eyes the apiarist can put the frames in place without crushing a single bee." Germans are certainly very patient, and, one would think, never in a hurry.

INTRODUCING QUEENS.—Herr Benedict Broglio states in the July number of *Der Bienen-Zuechter*, (Strassburg), that since the spring of 1876, he has practiced, with uniform success, the following method in introducing queens:—The bees of the hive to which the queen is to be introduced are brushed from the combs into a box, then dampened with fresh water, and poured down before their hive, the queen being permitted to crawl into the hive with the buzzing bees. Of course before this operation is commenced it is necessary to remove the queen that is with the colony at the time, or in case queen-cells are present, to destroy them when the bees have been shaken from the combs.

COMB FOUNDATION.—*Der Elsaessisch-Lothringische Bienen-Zuechter* published in Strassburg, contains, in the July number, the following editorial notice, and the article on comb-foundation, which is printed in this month's JOURNAL: "Comb foundation finds in our worthy co-laborer, Herrn Dr. Reisser, President of the Leberau section, a zealous defender. Those of our readers who are familiar with the French language have a clear exposition of the subject in Dr. Reisser's first letter, which is published in this number. The author will furnish a series of letters on this important topic. In the present letter he gives the history of comb foundation and a statement of its unmistakable value in the rational management of bees. We may add that Dr. Reisser manufactures his comb foundation himself, and has worked out and tried practically everything which he will communicate in his letters.

"A not less eloquent defender of comb foundation is Herr Huber, teacher in Niederschopfheim, the possessor of one of the largest and finest apiaries in Southern Germany, and founder of the apiarian society of the Grand Duchy of Baden. 'I was formerly a disbeliever in comb foundation,' says Herr Huber, in the last number of the *Eichstaedter Bienenzeitung*, 'but I acknowledge now that I was wrong. It is true that one can follow bee-culture without movable-comb hives, also without comb foundation. I have been able to get along 40 years without them, and since they are very dear, have, perhaps, through not using them, spared many hundred marks. But it was only in the year 1877 that I came to understand the truth in regard to this matter—that avoiding expenditures where they should be made, was not saving. Every apiarist knows how disagreeable and harmful to the bees drone-combs in the brood-nest are; yet, though I had employed always every known means to prevent the construction of drone-comb in the brood-nest, I was contending with this continually.' In the summer of 1877, Her Huber placed 300 frames of comb foundation in his hives, and with the exception of 2, they were all built out with beautiful worker-cells. Every practical bee-culturist knows the value of such a result. Comb foundation costs considerable, it is true; but the saving resulting from its use is much greater than the outlay required. So much in regard to the question of artificial combs."

Translated from *L'Apiculteur Alsacien-Lorrain*, by FRANK BENTON.

Comb Foundation.

To M. H. Apiculturist at Riquewihr.

MY DEAR FRIEND:—In writing to me that you will only decide in reference to the employment of artificial combs, after an acquaintance from A to Z, with all the advantages which they present, and with the faults from which, certainly, they are not exempt, you show yourself to be a prudent man—one who does not wish "to buy a cat in a sack;" but in asking of me all this information, you deceive yourself concerning the importance of my experience and the value of my judgment. I am not infallible; far from that; therefore I would not wish to impose my opinion upon you; nevertheless, as it is your desire, I will endeavor to serve to you (though in somewhat broken sentences), what I have, by hook or crook, learned concerning the subject which engages your attention.

Very early in the use of movable combs, apiarists finding that empty frames, or frames simply furnished with comb-starters, when placed in a hive during the months of

April, May, or June, were filled in greater part with drone-comb, sought for the means of restraining, if not of suppressing wholly, this work so prejudicial to their interests. These efforts remained unavailing for a long time, and hardly 15 years have passed since the first practical result was obtained.

Mehring, a cabinet-maker of the Palatinate, was the Archimedes, and stated the question which, of itself, ought to have been a ray of light for all the seekers: "By making sheets of wax having upon their surfaces impressions resembling the base of the cells, and fixing them in the habitations of the bees, is it not possible that the latter would follow the indication given and would continue to build upon these bases in the manner desired?" The reply was not waited for. Two little boards of hard wood, upon which had been engraved the hexagonal bases of the worker-cells, served as a mould. The sheets, imperfect as they were, were accepted by our industrious insects, and, to the great joy of the inventor, were filled out with cells formed and finished upon the ridges or edges left by the mould.

The problem was then solved; but, as often happens with useful inventions, the fruitful idea once expressed and thrown before the public, all the improvements that would bring about its application, came from without. Dummler, of Hamburg; Kuntz, of Jaegerdorf; Sand, of Gundan; Jacob, of Frauenbrunnen, &c., advanced rapidly in this direction. But no one acquired the skill of Otto Schulz, of Bucknow, who, from 1869, to this date, has shrunk from no sacrifice of time and money in order to reach the highest limit possible. Lightness of the sheet, figuring of mathematical exactitude, perceptible depth of impression (1 millimeter—.0394 of an inch), purity of the wax; nothing is lacking that would cause the article he manufactures to hold the first rank among productions of this kind. But have we arrived at the limit of progress? I do not believe we have. In fact has not M. Junger sent, within a month, to many native and foreign apiculturists, samples of artificial comb, one surface of which had cells wholly finished, promising to send them shortly a trial piece having the same sort of cells on both sides.

But wait a little. Let us consider the value of what we already possess, that is to say, of sheets simply figured. It is now admitted that every pound of comb made by the bees costs their proprietor a minimun of 10 lbs. of honey. Let us put the wax at the highest price, say 2 fr. 75c. (51.15 cts.), and the honey at the lowest, say 1 fr. (18.6 cts.), then the actual loss of the apiculturist is 7 fr. 25c. ($1.3485). This figure is expressive enough to convince us of the absolute necessity, if we wish to be rational in our management of saving the bees, at least partially, this expensive work. However, if we have at hand combs full of honey, nothing will be easier. The extractor will empty them without injury, and we will put them back into the hive and the bees will fill them again. But these blessed combs do not fall from heaven. In order to construct one of them, the bees consume enough honey to fill the half of another one; then comes the loss of time.—Quite a portion of the colony remain in the hive to perform this work, and even more must be present to keep up the high temperature necessary in wax-making. And the great honey yield is passing outside while the workers are occupied within.

I know very well that more than one author, even some of the great masters, claim "that colonies provided with combs exhibit less activity than those that have to build them, and that thus there is a compensation." This statement seems to me, at least, too absolute. That bees, furnished with organs for the elaboration of wax, may be required by nature to put them in use, everybody will admit; but between the wax-producing organs and the organs for the production of honey, is there a parity of functional power? Who can say that there does not exist a sort of correlation between the two, of such nature that when one operates more the other operates less; and this for the express purpose of preserving the equilibrium of the animal system?—Then how are we to explain the idleness of our insects? Very well, the explanation is deduced quite easily from the remedy that is employed to stimulate the sluggards.

If, notwithstanding the sunshine, and notwithstanding the honey-yield, your stock flies languidly, add to its combs, by placing between them one or two empty combs; that is to say, give it more air, and everything will return to order. Either I am much deceived, or this momentary inactivity only comes from the smallness of the apartment; hence, from the too great heat which exhists there, and which enervates the insects as it would man.

Dr. Reisser.

How to get rid of Ants.

During a recent visit to Mr. Humann, in Ostheim, I had an opportunity of becoming acquainted with a very successful method of speedily getting rid of ants which are so troublesome in the apiary.

One takes small bottles, fills them half full of sirup or sweetened water, and puts them in the places where the ants have their passage-ways, in such a manner as the necks of the bottles lean against a wall or board, in order that the ants may easily fall into the trap and drown.

By means of camphor, ants can be driven from rooms where honey is stored.

In gardens, lime-dust operates very destructively upon them. Their hills, after being scratched open, are sprinkled with lime-dust, and then hot water is poured on them.

To render jars of honey or preserved fruit inaccessible to these insects, place the jars in chests whose bottoms have been previously covered with ashes or pulverized chalk.—*Elsaessische Bienenzuechter.*

☞ Comb foundation is a great success. This morning (Monday) I found the queen had been laying in a hive into which the swarm was only put on Friday night, with the foundation.—*A London Bee-Keeper in British Bee Journal.*

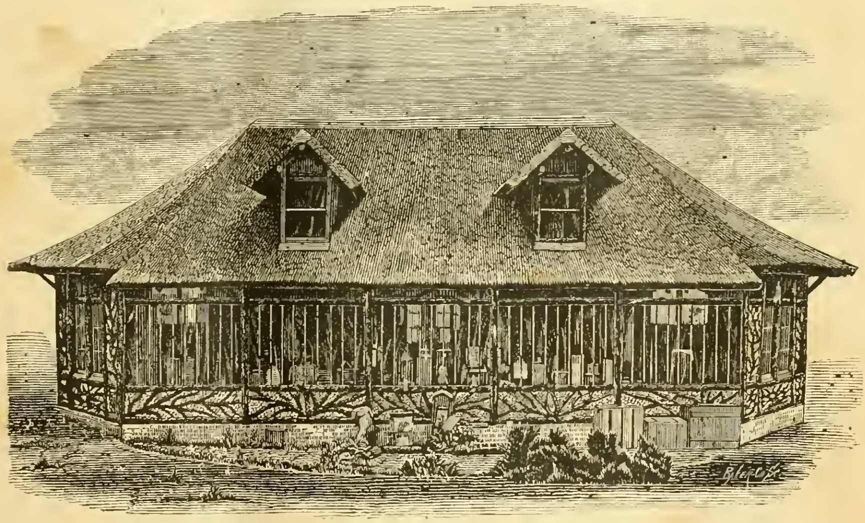
The Paris Exposition.

From our special correspondent at the Paris Exposition we have received the following very interesting communication:

EXPOSITION UNIVERSELLE.

FRIEND NEWMAN:—The "Champ de Mars," a place on the left bank of the river Seine, heretofore used for military exercises, is devoted to the great purposes of the Exposition. The main building, which covers the largest part of it, is a vast parallelogram, in the center of which is an ornamental garden. The allotment of space to each nation consists of a section of greater or less width, extending from the exterior of the building to the central garden, making a depth of about 225 feet. The approach to the building is through grounds elegantly laid out and ornamented with large trees, which have been transplanted. There are artificial lakes and grottoes, also rare exotics from the green-houses of the city. On the opposite side of the river is the trocadero, an elevated plateau of about 75 feet in height, sloping gradually to it, and which is reached by the Jena bridge. Through the grounds, covering the slope from the palace to the river, have been erected buildings in which to exhibit special industries. One of these, the "Chateau de l'Insect," quite an attractive specimen of rustic architecture, with a straw-thatched roof, was erected by the French government, through the persuasion of the various French apicultural societies.

This exhibition is open to all interested in bee-culture throughout the world, for the purpose of encouraging inventions, ventilating the most approved method of managing bees, cementing a kindly feeling between producers and dealers, bringing the products prominently before the public, a free exchange of opinions, and otherwise promoting the general interest of apiarists.



"CHATEAU DE L'INSECT"—PARIS EXPOSITION.

[Messrs. H. K. & F. B. Thurber & Co. very generously supplied us with two large photographs of the "Chateau de l'Insect," from which we have had the above engraving prepared. The originals we shall have framed and placed in our museum.—ED.]

The various hives entered the lists for competition, display a proof of the great interest now taken by Europe in this industry; at the same time they are a sad commentary upon the incorrect ideas of European bee-keepers, when compared with progressive Americans.

However, when we consider that many of their hives came from countries where they still cling stubbornly to the idea that a wooden shoe is better than a leather one, it is gratifying to note a tendency toward improvement.

I cannot help regarding as an unfortunate circumstance the fact that all exhibitors of bees and their products were not accommodated under one roof, as the display would have certainly been much more impressive; and many interested—friend Abbott among others—would not have gone home without seeing all. As it was, every inch of room in the "Chateau de l'Insect" was assigned long before the Exposition opened, and a large number of apiarists had to content themselves with space in their different governmental departments. Their exhibits were none the less interesting for this, but bee-keeping, as an industry, lost much of the force it would otherwise have had in a grand and united display.

I presume the multiplicity of other sights monopolized so much of Mr. Abbott's time and attention that he failed to notice, while here, the elaborate display in the American department made by Messrs. H. K. & F. B. Thurber & Co., for in the July number of the British *Bee Journal*, he says the American exhibits were conspicuous by their absence. The Thurbers' always try to be abreast, and to this firm's enterprise the bee-keepers of the United States owe a fine exhibition of their honey. This firm called particular attention to the superior quality of American honey; straight, well-filled combs, stored in convenient boxes, which are in turn packed into neat crates, well adapted for general sale and transportation. Many people, probably in our country, are unaware of the wide range of this firm's trade, and but comparatively few are really aware how much labor, capital and pluck, is needed to sell even a box of honey or a cake of beeswax. It would appear bat simple matters, and yet under careful manipulation of good business men, really imply vast commerce, wide as the earth itself.

It was very gratifying to me, as an American, to hear the prize boxes and crates, as well as the very fine honey they contained, so universally praised by Europeans. Every box was an indisputable witness that although we are called *young* Americans, in the present of bee-culture we are really the *elders* of all the world!

I cannot refrain from recording my regret that some of our enterprising bee-keepers did not utilize photography, and in this manner illustrate a flourishing American apiary and our methods of raising bees for profit. You know how badly Richard wanted a horse and how anxiously Blucher or daylight was looked for, but you will never know with what earnestness I wished for a patent bee-hive man. Strange and almost incredible as the statement may appear, not one of these indefatigable ones were to be seen, and not one American hive or implement was on exhibition! It was refreshing, however, to find the AMERICAN BEE JOURNAL, and the *Bee-Keepers' Magazine* displayed conspicuously! They were nailed to the counter of Messrs. Thurber's exhibit in such a manner as enabled those interested to read them, and they have been thumbed until they are ragged. Your own very beautiful poster occupied a prominent position—and these were the only specimens of bee-literature I saw at the Exhibition.

All the way from Skaneateles to Paris, via Syracuse, New York City, American Institute Fair, through the critical observation of a hundred bee-keepers, across 3,000 miles of the deep sea, on the counter of the Liverpool Exchange, to the largest establishment in London, Hull, Leith, Glasgow and Belfast, back to London, across the rough channel to finally rest, like a brass kettle in the sunshine at the Paris Exposition, came Doolittle's cherry-crate of Honey!! What a history this little crate has had!!! I can, in my mind's eye, see friend Doolittle, working over his bench at the crate, and the look of satisfaction which pervaded his countenance when he first unveiled it, (I mean the crate), to his New York friends! Why, he looked like the gambler who held four aces in his hand and the fifth up his sleeve! He knew he could sweep the deck! Then, again, I see three gentlemen bathed in perspiration, discussing the merits and demerits of this same little crate of honey; they were so long in deciding that the gas was turned off and they were left alone in the dark in the middle of the night to determine its beauty. I remember what a disturber of the peace it became, and how the little dictator, after all, has obliged the world to acknowledge that these boxes are the "most marketable shape," and win from *you* the title of "prize box!"

In the monotony of a sea voyage, after all the books and papers had been read, and every nook and corner of the steamer had been seen, the purser created quite a sensation by announcing that as all hands were anxious to be entertained, he had on board the ship an exhibit intended for the Paris Exhibition, that he would show them. He said upon his "word of honor," and without the least desire to exaggerate the matter at the expense of truth, that that which he was about to show them had required 20,000 individuals a long time to construct, the entire work had been supervised by a lady, and from the commencement to the completion not a single word had been spoken, either in directing its construction or executing the orders. Neither had they ever before, nor will they ever again make its like. He proposed, therefore, to clear the saloon, and in consideration of two shillings each to be dropped into the contribution box of the Seamen's Orphanage of Liverpool, (one of which almost all steamers carry), to admit all that might desire to see this wonderful exhibit. It is hardly necessary for me to tell you that the little "cherry crate" was again the admiration of all beholders. The joke was enjoyed, and that crate of honey thus became a silent contributor to a great charity.

There are several other incidents quite as interesting, in her career, but I forbear mentioning them, fearing I have already taxed your valuable space too much.

ENGLAND.

The display made by **Messrs. Abbott**, in this department, is very creditable; their various contrivances are practical and plainly show these gentlemen to be among the leading bee-masters. I noticed their celebrated standard hive and three others, an extractor, a wax smelter, supers, &c.

Geo. Neighbour & Sons, whose fame as bee-men is world-wide, made an excellent exhibit, that was in keeping with their characteristic enterprise. All their hives except the "Philadelphia" are straw ones. Although the display is large, exhausting, I think, their entire catalogue, it was in many respects a duplicate of their Centennial exhibit, and contained little, if anything, that would interest American bee-keepers enough to adopt. Their observation hive, in the *Chateau de l'Insect*, is the best for that purpose that I ever saw. They exhibit a Bingham smoker with a slight alteration.

FRANCE.

Barat, of Aiguillon, has a working colony of bees, in a hive constructed according to his ideas of perfection, also honey and wax.

Beal Canonere, of Camnrai, has quite a variety of most delicious mead and hydromel, bottled like wine and handsomely labeled. Such a display as this always monopolizes considerable of my time, because they opened my eyes to new outlets for American honey. I had to employ the services of an interpreter, in order to ascertain the particulars of its manufacture.

M. Beau, of Mailly-la-ville, had a work on bee-culture, also several straw hives, filled with honey; the same style as those in use before the days of Huber. Remembering that a tree is judged by its fruit, after looking at this man's product, I could only conjecture the caliber of his book.

Widow Bufre, of Villers-sur-Condun, makes a grand exhibition of honey and beeswax, also numerous hives.

E. Beuve, of Creney, makes that sort of a display which never fails to attract the masses, viz, live bees. These they had working in one of their modern hives, so arranged as to demonstrate practically every good feature in their construction.—They also introduced many little convenient contrivances used by them in their apiaries.

M. Deproze, from Reims.—The champaigne made from honey, and bottled by this gentleman, vies, in style and quality, with the best manufactured from the grape.

P. Abadie Ferran, of Captiux, shows some very pretty beeswax, cast into various sizes of cakes, and done up conspicuously, so as to attract attention. Their specimens of honey have the appearance of old exhibition pieces. Their hives are straw, with movable frames.

Alberic & Bor, of Montigney-en-Morvand, are represented by straw supers, filled with honey, a drone trap, and quite a neatly printed treatise on bee-keeping.

Argans & Son, of Angerville, display one barrel of candied honey, about the color of our buckwheat.

J. P. Arvilet, of Selogney, furnishes a description of their method of cultivating bees, and exhibits a collection of apiarian tools, a few frames filled with honey, about the shade of our basswood, besides other samples of comb and extracted honey.

C. A. Aube, of Carbreuse.—The contribution made by this gentleman interested me very much. It consisted not only of honey and beeswax, but a very superior article of alcohol, made from honey. There were many others who showed this kind of alchohol, but this struck me as the best that I examined.

E. Anmignons, of Berzieux, exhibits apiarian implements, honey and a swarming apparatus, consisting of a pole with a bag on the end of it; also some fumigators.

Balet Bros., of Paris, make a brilliant display of honey-producing plants in full bloom.

Bourdier & Montuncamp, of Mont Boyer, exhibits specimens preserved in alcohol, of eggs, larvæ, queens, drones and workers, artistically arranged, so as to show every successive stage of a bee's growth.

M. Burghard, of Paris, exhibits an all-metal honey extractor.

J. N. Cayatte, of Billy-lez-Mongiennes, manufactures vinegar, made from honey. He had on exhibition a very superior and wonderfully fine flavored vinegar; an article we might make in America. They also have some very nice honey and wax.

Charton Troissard, of Dampierre-de-l'anbi.—Here we see another and feasible way of employing honey. They have a great variety of fruits preserved in honey, also mead, hydromel and other kinds of liquors. All these were taking in looks and lucious in taste.

I might encumber considerable more of your space by the enumeration, in detail, of a hundred other minor displays in the

"Chateau de l'Insect," but will pass the models, drawings and confections, to note in a flying manner a few that had to find shelter in other departments.

Briscoffski, of Moscow, Prussia, created somewhat of a flutter among bee-men with his "Perfection Hive," which is a near approach to an "American."

ITALY.

To Prof. Louis Sartori, of Milano, a great amount of praise and credit is due for the very impressive arrangement of Italy's display, in the general arrangement of which no small amount of architectural skill was required. The photographic art has been employed in a most liberal manner by the Italian government, and a series of 50 splendid views of various apiaries and their surroundings add much to this certainly very excellent display; nor is this all in the picture line. There are 10 large brilliantly-colored plates 9x13, the anatomy, &c., of the honey-bee, while there are others showing the interior of work-shops belonging to various bee-keepers, illustrating their manner of working and arrangement of machinery. Photography is a novel and instructive feature of this section.

The individual contribution of M. Sartori, consists of about one dozen differently designed hives, all movable frames and some of them made of wood; a bellows smoker, with long projecting handles; sample phials of honey from every province of Italy. Very fine vinegar; a feeder with a float in it; various styles of wooden urns and glass jars for packing honey in; a very elaborate design of his establishment in Italy; queen cages, boxes for transporting queens in; veils, and miscellaneous shaped knives, and a very large assortment of candied honey; frames holding one pound of comb honey and a variety of ginger-bread, into the composition of which honey enters very largely. Also a tin extractor, rigged upon a wooden frame, and a specimen copy of his celebrated work "L'Apicoltura in Italia."

M. Giovanni, of Antignati, had on show several hives.

Count Gartano, of Milano, had an extensive display of hives and honey.

B. Bottamini, of Bormio, wins the eye with a very ingeniously-constructed model of his apiary; photographs of beautiful Bormio and its surroundings; 2 bee hives, a large collection of honey and beeswax, and a variety of very finely-flavored liquors made from honey.

Guiseppi's Apiary is represented by handsome views, as many as 8 varieties of delightful liquors, 5x6 frames for honey, extractors and presses for pressing out or straining honey, and an additional attraction in a section of cork tree 5 feet long, 12 inches in diameter, hollow, and filled with honey by the bees.

Italy, not content with the magnificent display in her agricultural department, continues to interest bee-keepers by her show in the department of manufactured goods of crude beeswax and the brilliant candles and tapers made therefrom.

JAPAN.

The Japanese government make an impressive exhibit of beeswax and strained honey.

BOLIVIA

contributed only a box of nice beeswax.

HUNGARY.

Wm. Rosenthal of Budapest, Hungary, has an attraction in honey and wax.

NETHERLANDS,

have on exhibition two pyramids of white and yellow wax, and several jars of honey and bottles of hydromel.

PORTUGAL,

has ten samples of honey and beeswax.

VENEZUELA

display a straw super filled with honey; also an assortment of white and yellow wax. Surplus boxes, filled with comb, and weighing 3 pounds each, a limb of a tree with honey comb built on to it, and a straw-thatched wooden-framed hive, as well as a variety of extracted honey in nice jars.

In the horticultural annex, Louis Corset, beekeeper at Cher, France; G. Dumas, Saint Remy, France: M. Polizard, whose establishment is at St. Denis de Palm; M. Malesset Buzancais, Rameau, of Toulon—all have very nice and creditable shows of honey, wax and hives.

The Messrs. Field, the great candle manufacturers, and the largest consumers of beeswax in the world (who by the way have lately made H. K. & F. B. Thurber & Co., their sole agents in America), come to the front, as usual, with their magnificent array of candles. Surely the little bee herself might verily become inflated with self-importance could she be aware of the vast traffic her products create. The religious pageantry of Roman Catholic countries of Europe and America owe much of its splendor, and more than half perhaps of its influence on the mind, to the altar-candles. each the tribute of a thousand flowers, collected by a thousand bees, of all substances for the illumination of holy altars, is certainly the most appropriate—so pure, so sweet in its origin, leading back the thoughts to beautiful blossoms and gardens. This firm consume ten tons of American beeswax per month, besides large quantities from other countries.

I purposely avoided giving a detailed description of the various hives &c., for so doing I would simply occupy your space without furnishing your readers with any new or useful ideas. Argus.

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How to Winter.—Those who wish to post up on the subject of wintering, will do well to read Prof. Cook's essay as read before the National Convention of 1876. —Price 15 cents.

Honey Used for Cooking Purposes.

Council Grove, Kansas, July 8, 1878.
"Will you please give Receipts for Honey Cake in the Journal?" M. F. Clute.

Certainly. Instead of dealing disease and death promiscuously to those who indulge in its use, as do syrups, honey gives mankind, in the most agreeable manner, both food and medicine.

It is a common expression that honey is a luxury, having nothing to do with the life-giving principle. This is an error—honey is food in one of its most concentrated forms. True, it does not add so much to the growth of muscle as does beefsteak, but it does impart other properties, no less necessary to *health* and vigorous physical and intellectual action! It gives warmth to the system, arouses nervous energy, and gives vigor to *all* the vital functions. To the laborer, it gives strength—to the business man, mental force. Its effects are not like ordinary stimulants, such as spirits, &c., but it produces a healthy action, the results of which are pleasing and permanent—a sweet disposition and a bright intellect.

The use of honey instead of sugar for almost every kind of cooking, is as pleasant for the palate as it is healthy for the stomach. In preparing blackberry, raspberry or strawberry short cake, it is infinitely superior.

Well-purified honey has the quality of preserving, for a long time in a fresh state, anything that may be laid in it or mixed with it, and to prevent its corrupting in a far superior manner to sugar; thus many species of fruit may be preserved by being laid in honey, and by this means will obtain a pleasant taste and give to the stomach a healthy tone. One who has once tried it, will not use sugar for preserving fruit; besides, honey sweetens far more than sugar.

In fact, honey may replace sugar as an ingredient in the cooking of almost any article of food—and at the same time greatly add to its relish.

Digestion (all-potent in its effects on the mind as well as the body) depends largely on the food. Poor food received into a poor stomach is the cause of many unhappy homes—while good, healthy food, received into a healthy stomach becomes "an Angel of Peace" to many a household.

The following are a few of the many desirable things that may be made, with honey as an ingredient:

Honey Lemon Cake.—One cup butter, 2 cups honey, 4 eggs well beaten, teaspoonful essence of lemon, half cup sour milk, teaspoonful soda, flour enough to make it as stiff as can be stirred, bake at once in a quick oven.

Hamburg Honey Cake.—The flour intended for this cake should be well dried and sifted, before being weighed; then take 12 pounds of flour and 12 pounds of honey; bring the honey to a boiling heat, pour it in the flour, and mix thoroughly.—Dissolve 2½ ounces of pearlash in 2 gills of rose-water, the evening before; take 1 pound of butter or lard, 2 table-spoonsful of of West India rum, the grated rind of 2 lemons, the candied or sugar-coated rind of 2 oranges, and a very small quantity of pounded cloves. The solution of pearlash is to be added when the dough has become cool, and the mass must be thoroughly kneaded. The dough may be prepared several days in advance of the baking.

Honey Brown Cake.—To 4 pounds of flour take 4 pounds of honey, ½ pound of pulverized loaf or lump sugar, ½ ounce of Canella, 3 ounces of lard, a small quantity of cloves, 1 ounce of pearlash, 1 gill of rose-water, and 2 spoonsful of rum or French brandy. The honey and lard are to be incorporated by boiling, and when again cooled off, add the pearlash previously dissolved in the rose-water. Knead the mass well, let it stand several days, and then work it over again very thoroughly. Some persons prefer to omit the cloves, and substitute for them pounded cardamon seeds, grated lemon peel, or sugar-coated orange peel.

Honey Apple Cakes.—Soak 3 cups of dried apples over night; chop slightly, and simmer in 2 coffee cups of honey for 2 hours, then add 1½ coffee cups of honey, ½ coffee cup of sugar, 1 coffee cup of melted butter, 3 eggs, 2 teaspoonsful saleratus; cloves, cinnamon, powdered lemon or orange peel, and ginger syrup, if you have it. Mix all together, add the apples, and then flour enough for a stiff batter. Bake in a slow oven. This will make 2 good sized cakes.

Honey Fruit Cake.—Four eggs, 5 cups of flour, 2 cups of honey, 1 teacupful of butter, 1 cup of sweet milk, 2 teaspoonful cream of tartar, 1 teaspoonful soda, 1 pound of raisins, 1 pound currants, ½ pound citron, 1 teaspoonful each cloves, cinnamon and nutmeg; bake in a large loaf in a slow oven. This will be nice months after baking as well as when fresh.

Honey Sponge Cake:—One large coffee cup full of honey, 1 cup of flour, 5 eggs.—Beat yelks and honey together, beat the whites to a froth; mix all together, stirring as little as possible; flavor with lemon juice or extract.

Railroad Honey Cake.—One cup of honey, 1 heaping cup of flour, 1 teaspoonful cream tartar, ½ teaspoonful soda, 3 eggs and a little lemon juice; stir all together 10 minutes. Bake 20 minutes in a quick oven.

Honey can be used in cooking anything, just as sugar is used, merely using less milk or water than called for when sugar is used, on account of honey being a liquid.

Milk and Honey.—Take a bowl of milk and break some light wheat bread and also some white comb honey into it. This is delicious—the proverbial "milk and honey" of the ancients.

Honey Cake.—One quart of extracted honey, ½ pint sugar, ½ pint melted butter, 1 teaspoonful soda, dissolved in ½ teacup of warm water, ½ of a nutmeg and 1 teaspoonful of ginger. Mix these ingredients and then work in flour and roll. Cut in thin cakes and bake on buttered tins in a quick oven.

German Honey Cake.—Three and one-half pounds of flour, 1½ pounds of honey, ½ pound of sugar, ½ pound of butter, ½ of grated nutmeg, one-sixth of an ounce of ginger, ¼ of an ounce of soda; roll thin, cut in small cakes and bake in a hot oven.

Cheap Honey Tea Cake.—One teacup of extracted honey, ½ teacup of thick sour cream, 2 eggs, ½ teacup of butter, 2 cups flour, scant ½ teaspoon of soda, 1 teaspoon of cream of tartar; flavor to taste.

Honey Ginger Cake.—Three cups of flour, 1½ cups butter; rub well together, then add 1 cup brown sugar, 2 large tablespoonful of ginger, and, if you like, the same amount of caraway seeds; 5 eggs, 2 cups of extracted honey and 3 teaspoonsful of baking powder.—Beat it well, and bake in a square, iron pan 1 hour or more.

Honey Cakes.—Four cups of extracted honey, 1 cup butter, 2 teaspoonsful of baking powder, and flour added by degrees, to make a stiff paste; work well together, roll out ½ an inch thick, cut into cakes and bake in a quick oven. See that they do not burn.

Honey Tea Cakes.—Three pounds and a half of flour; 1½ pounds honey; ½ pound of sugar; ½ a pound of butter; ½ a nutmeg grated; 1 tablespoonful of saleratus, or carbonate of soda. Mix the sugar with the flour and grated ginger, and work the whole into a smooth dough with the butter beaten to cream, the honey and saleratus, or soda, dissolved in a little hot water. Roll it a quarter of an inch thick, cut it into small cakes, and bake them 25 minutes in a moderate oven.

Honey Cookies.—Mix a quart of extracted honey with ½ a pound of powdered white sugar, ½ a pound of fresh butter and the juice of 2 oranges or lemons. Warm these ingredients slightly, just enough to soften the butter, and then stir the mixture very hard, adding a grated nutmeg. Mix in gradually 2 pounds or less of sifted flour, make it into a dough just stiff enough to roll out easy, and beat it well all over with a rolling pin; then roll it out into a large sheet half an inch thick, cut it into round cakes with the top of a tumbler dipped frequently in flour, lay them in shallow tin pans slightly buttered, and bake them.

Honey Cakes.—Three cups of honey, 4 cups sour milk, ½ cup butter, soda to sweeten the milk; mix rather stiff.

Honey Ginger Snaps.—One pint honey, ¾ pound of butter, 2 teaspoonfuls of ginger, boil together a few minutes, and when nearly cold put in flour until it is stiff, roll out thinly and bake quickly.

Honey Pudding.—Three pints thinly sliced apples, 1 pint honey, 1 pint flour, 1 pint corn-meal, small piece butter, 1 teaspoonful soda, the juice of 2 lemons and their grated rinds; stir the dry soda into the honey, then add the apples, melted butter and a little salt; now add the lemon rind and juice and at once stir in the flour. Bake one hour. Serve hot or cold with sauce.

Grapes Preserved with Honey.—Take 7 pounds of sound grapes on the stem, the branches as perfect as possible, pack them snugly without breaking, in a stone jar. Make a syrup of 4 pounds of honey, 1 pint good vinegar, with cloves and cinnamon to suit, (about 3 ounces of each), boil well together for 20 minutes, skim well, then turn boiling hot over the grapes and seal immediately. They will keep for years, if you wish, and are exceedingly nice. Apples, peaches and plums may be done in this way.

Preserving Fruits.—Put honey and fruit in a vessel, then put the vessel in a kettle of water and boil, the same as with sugar.

Honey Liquorice.—Honey and a strong infusion of liquorice boiled to a proper consistency.

Honey-Foam (*sputum*).—Prepared by beating, with the addition of a small quantity of white of eggs. It is used to brush over cakes and confectionery before baking.

Honey Preserves.—All kinds of fruit made into jam, with honey instead of sugar, are nice. "Butter," made with extracted honey, is much nicer than when made with sugar. For grapes, pick from the stem and pack into a jar until it is full, then turn cold honey over them until they are covered well. Seal up without any heat, and keep in a cool place. After a few months they will be found to be delicious.

Extracted vs. Strained Honey.

For some time we have been calling attention to the misnomer "Strained Honey" when applied to the pure "Virgin Honey" obtained by the use of the "Extractor." Friend Wm. Muth Rasmussen, of California, in a recent letter to the *Evening Express*, on this subject, says:

"Before the introduction of the honey-extractor, all *liquid* honey was *strained*, the process of which, in this part of the country, was commonly as follows: The surplus honey stored in the top of the bee-hive, was cut out and dumped into a reservoir (now generally known as a sun strainer) provided with a glass cover, when the heat of the sun would melt the honey comb, and the liquid honey ran through a pipe into a tank of the main reservoir, while the beeswax would collect into a cake in the bottom of the sun-strainer, to be cut out and re-melted for the market. In this way the honey was unavoidably mixed with bee bread (the pollen of the flowers), an article of not very pleasant taste to man, even if it is to the bee, besides dead bees and brood.

The honey naturally assumed some of the flavor of those ingredients, while it lost some of its own flavor and changed to a darker shade of color by being exposed to the heat.

In the beginning of 1871 my attention was drawn to the honey extractor, a machine advertised in the Eastern papers, and just then coming into use. I obtained one, and was probably the first one in Southern California to take the honey in this way.—Since then, all the principal bee-keepers here have adopted the honey extractor.—The honey comb, being built in frames like those in the main hive, after having been removed from the upper part of the hive, is carried to the honey house, where it is uncapped, or the covering removed with a knife from the mouth of the cells. The comb is then placed in the extractor, a very simple machine, which, by centrifugal force, throws the honey out of the cells.—The honey is then removed to the tank, which generally is supplied with a strainer to exclude bees and flies, and after standing a short time, the scum and such diminutive particles of the comb as are broken off in extracting, rise to the surface to be skimmed off, while the pure, clean honey is drawn off from the bottom of the tank. This honey is virtually pure virgin honey, so much prized in ancient times, being removed from the comb in a cold state, but by a quicker method than of old, and being unpoluted by the bee bread, dead bees and brood.

It is this difference between *strained* and *extracted* honey, to which I desire to draw the attention of the public, and I now mark all my extracted honey as such. The honey comb, after being emptied in the extractor, is returned to the hive, to be refilled by the bees. The sun strainer is now only used for converting the cappings of the honey comb into beeswax, and what little honey adhering to the cappings, is obtained in this way, should either be retained at the apiary, to be fed to weak colonies in the spring, or if sold at all, should be so with the clear understanding that it is really *strained* honey, and an inferior article after all.

I would earnestly advise bee-keepers not to extract their honey until it is fully or nearly all capped over, as it is only proper at this stage. It is much easier to throw the honey out of the comb before it is capped over than after, not only because it saves the laborious work of uncapping, but also because the honey is thin and watery, and not until it has been evaporated by the bees to the proper consistency, the sign of which is that it is capped over, it is good, ripe honey, pleasant and safe to eat under all circumstances. It is a fact well known among bee-keepers in the Eastern States that uncapped honey will produce disease among the bees that are confined to such food during the long winter, just as unripe fruit or half-baked bread would among human beings; and also, that honey which is extracted before being ripe is very apt to sour, thus bringing its own penalty for throwing on the market an inferior article, easily obtained, instead of a good article, for which the producer can vouch and which will give satisfaction to the consumer.

There is a prevailing idea that candied or granulated honey is inferior to liquid honey. This is a serious mistake, the facts of which ought to be more generally known. Nearly all pure honey will granulate in course of time,—that from certain flowers having a tendency to granulate quicker than that from others. Exposure to a cold temperature is another cause of this change. It is one test that the honey is pure. Manufactured or adulterated honey cannot be brought to granulate. In France, honey cannot be sold except in this state, as the public are coversant with the fact, and know that as such they are buying pure honey and not an adulterated article.—If honey granulates, it is very simple to return to its liquid state. Place the vessel containing the honey in a kettle or boiler of water; bring this to a boiling point, and before long the honey will become liquid as when first taken from the hive, without losing any of its original flavor or taste.—The honey vessel should have a small opening, sufficient to let the air out, to prevent the expansion of the air and honey from bursting it. By liquifying a little at a time, the different members of a family may take their honey in which ever way they please, many persons preferring the candied to the liquid honey."

Southern Notes.

For the American Bee Journal.

Improvement of Bees.

The question, with propriety, may be asked: "Is the honey-bee susceptible of improvement?" We answer, most emphatically, it is. The improvement of the honey bee has been greatly neglected. Importations have been made year after year, and still we see no marked difference in quality from the first importations made years ago; in fact the Italian bees imported of late years, as a general thing, are not of as large and fine color as those imported by Parsons and others at an earlier date. Why is this? Have they retrograded? or, have our later importations been obtained from different portions of the country, thus making the difference in size, color and quality? This difference has not been brought about by breeding in this country, although no special care has been given them to obtain their highest perfection. Not one breeder in five hundred or one thousand has ever made a specialty of breeding for improvement in any other way than to introduce, now and then, fresh blood from imported stock. When this is done they seem to think no further improvement is necessary. Here is where they fail to accomplish the highest standard of purity and excellence combined. The breeders of our imported stock of cattle, sheep, hogs, &c., make great improvements upon their stock by selecting every time from the very best until they have arrived at the perfection of all the characteristics of a fine, noble animal. They, in their wisdom of improvement, have in many instances by far excelled those imported from the old country. So much so, that many a noble animal has been shipped to Europe, having excelled in many points the European breeds.

This shows wisdom and progress in the American breeder. It is a fact, we believe, that the Italians have never made the breeding of the Italian bee a specialty; or, at least given it that attention so necessary to make and bring out those points of excellence that are found in the Italian honey bee. The queens are gathered up promiscuously from different portions of that country and shipped to this, without, perhaps, that distinction regarding quality that should be made or given to them. We have seen some imported queens that, in point of quality were worthless. From their manner of breeding, or otherwise, they had about run out. In many cases these queens are distributed over our country and have not proved to be what they should.

While we find some very fine from the imported stock, we hope to see a change in this department. Let us try and see what improvement we can make in breeding our bees. By carefully selecting from our very best, we can combine all the points of excellence that can be asked for in our bees. But, says one, how am I to accomplish this? First, by selecting from the best those possessing great vigor, large and well marked, you can combine, if you wish; 1st, size; 2d, vigor; 3d. prolificness; 4th, color; 5th, temper. All these points can soon be achieved by careful breeding. We first test the quality of queens and drones in mating them; and when we have tested fairly the qualities of either queens or drones, and found them to duplicate themselves pretty well, we choose them to breed from to cross with others. One of the best and easiest plans is to commence very early in the spring to feed such stock as are to be used for breeding purposes. By feeding a little regularly for a short time, you will produce young drones one month in advance of those not fed. At the same time raise up what queens you wish, and you will secure pure fertilization from such as you desire. Again, in the fall, we wish to test the breeding qualities of some of the young queens we raised in the spring. As soon as the drones are destroyed, which is, here in the South, about the first of August, we place upon our hive a slide to prevent any drones entering, we place good drone comb in the center of our hive and commence feeding regularly every day. We will soon have plenty of drones from such stock as we desire, while all others are destroyed. We raise up what queens we want, and from the drones we have reared we get another cross; and if we find improvement has been made, we keep on breeding from this strain for several generations, and then cross to another. By exercising care and judgment, we will soon see if we are making any progress, which we seldom fail to see in the first or second generation.

EGGS IO QUEEN CELLS.

I had a colony of Italian bees that would start large numbers of queen cells, to all appearance preparatory to swarming. I have found as high as 15 cells, with from 6 to 14 eggs in a cell. I destroyed all the cells, and in 3 days found the same thing existing again. I took from them their queen, and destroyed all their cells, and gave them a frame of nice new comb with plenty of eggs and brood in all stages. In 3 days I found the same thing repeated. I destroyed all the cells, and gave them a young fertile queen, but they still persisted in making cells and feeding them as though they contained but one egg. I then exchanged its place with another heavy colony, which stopped the singular phenomena. A. F. MOON.

Rome, Ga.

For the American Bee Journal.

Matters and Things in Alabama.

FRIEND NEWMAN :—I fear you will have to give us a whole number for "blasted hopes;" as brother Heddon says, I fear this is to be "the summer of our discontent." Already the wail comes up, from Maine to Louisiana, that bees are making no surplus. I landed here, from Oxford, Ohio, the 30th of last January, with 4 colonies of Italian bees ; 3 of them in good order. One being a late swarm and the frames not quite filled with comb, broke dawn, destroying half of the bees ; but the queen was all right. I fixed them up after their ride of 500 or 600 miles, and on the first of February they began to bring in pollen.

I also bought 30 colonies of black bees, in all kinds of gums, for a $1.50 each, and transferred them to movable-frame hives. The season opened very early. In March, we had plum, peach and cherry blossoms in abundance, which they stored in the brood chamber, sufficient to carry on brood-rearing and comb-building ; but I noticed the honey from this source was quite thin, and somewhat bitter, but seemed to answer their purpose. About this time, I had visions of tons of nice, white comb, and barrels of extracted honey ; but alas, "there is many a slip between the cup and the lip," and "when it rains soup, my bowl is generally upside down." This time I had the bowl set right, but the shower didn't come. White clover promised well for awhile ; the bees filled the brood-chamber and commenced building comb in the upper frames, but a severe drouth set in and dried up the clover with almost everything from which they could get anything sweet.—Then there was no honey-dew,—something very unusual for this country. Neighbors tell me that last year the honey-dew was so plenty that it dripped from the leaves of the poplar and other trees of the forest, but this is destined to be the poorest for many years.

The bees commenced drawing on their stores, and at this date have nearly exhausted them. When I open a hive in the heat of the day, robbers pitch in and would soon clean out the strongest, but I close up the entrance promptly against friend or foe ; let them remain closed one hour, then give them room for one bee at a time to pass out or in.

A very good plan is to throw a sheet over the hive and tuck close around it, so that none can get out or in. When the robbers stop buzzing around it, remove the cloth and contract the entrance, and they will generally defend themselves.

In transferring, I had a lot of black comb which I made into wax. I noticed in moulding it that it was sure to crack. On looking about for the cause, I discovered that the edges cooled first, sticking fast to the vessel when cooling; I took a thin-bladed knife and kept one cake loose around the vessel while cooling. The consequence was a nice cake of wax, without a crack.

The best remedy I have ever found for the sting of a bee is lobelia. I chew the leaves and stock, and apply it wet with spittle. I think the tincture of lobelia would be still better.

I think D. D. Palmer gave Novice a good one in reference to "Our Homes." He is apt to jump at conclusions. Probably he has a dozen letters, out of 3,000 subscribers, in favor of "Our Homes;" but should he call us all up and take a vote, he would see how it stands. I think everything not pertaining to bee-culture out of place in a bee publication. Long may the AMERICAN BEE JOURNAL live. JOHN R. LEE.

Huntsville, Ala., Aug. 2, 1878.

Correspondence.

For the American Bee Journal.

The Aphides, or Plant Lice.

I submit the following extract from Dr. Hartwig's "Wonders of the Polar and Tropical World," who is also author of "The Sea and its Living Wonders," and other works. JOHN MURRAY.

Woodman, Wis., Aug. 5, 1878.

"The aphides, or plant lice, eject a sweet, honey-like fluid, which may be correctly termed their milk, and which is so grateful to the ants that they attend on the honey flies for the sole purpose of gathering it and literally milk them as we do our cows, forcing them to yield the fluid by alternately patting them with their antennæ. But the most extraordinary part of these proceedings is that the ants not only consider the aphides as their property, but actually appropriate to themselves a certain number which they inclose in a tube of earth or other materials near their nest, so that they may be always at hand to supply the nourishment which they may desire. The yellow ant, the most remarkable cow-keeper among our indigenous species, pays great attention to its herds, plentifully supplying them with their proper food, and tending their young with the same tenderness which it exhibits towards its own. With the same provident care a large black ant of India constructs its nest at the root of the plant upon which its favorite species of aphis resides. The ants of tropical America, where no aphides are found, derive their honey from another family of insects—the numerous and grotesquely-formed membracidæ, which are most abundant in the regions of Brazil. According to Mr. Swainson many of these little membracidæ live in families of 20 or 30, all clustered together on the panicles of grasses and on the tops of other plants like the European plant lice. These are regularly visited by parties of a little black ant which may be seen going and coming to their heads and attending them with the same care which the European ants bestow on the aphides. To render the similarity with cattle more complete, the membracidæ possesses horns growing out of their heads, or are otherwise armed, while their large, abrupt heads remind the entomologist of the bull or cow. The Mexican honey ants (*Myrmecocystus Mexicanus*), are, if possible, still more remarkable, for here we see an animal rearing others of the same species for the purpose of food. Some of these ants are mainly distinguished by an enormous swelling of the abdomen, which is converted into a mass like honey, and being unable in their unwieldy condition to seek food themselves, are fed by the laborers until they are doomed to die for the benefit of the community. Whether this vast extension is the result of an intestinal rupture caused by an excessive indulgence of the appetite, or whether they are purposely selected, confined and overfed, or wounded for the purpose, has not yet been determined."

For the American Bee Journal.

Basewood—the "off year."

EDITOR OF JOURNAL:—In the JOURNAL for August you say that "basswood is a failure in some localities this year." For 25 years our basswood has blossomed only every other year. This, I think, you will find the case all over the East, North and West. I have often wondered that old bee-keepers from basswood localities never mentioned this fact. Some very young trees will blossom a little the off year, and in large forests you will see one tree out of 100 in bloom that year, and the next year all are full. Next year (1879), is the basswood year, and if the season is without extremes, it is one of the most wonderful in yielding blossoms for honey we have in the North. Basswood comes in bloom about the 12th of July here in Wisconsin.

Our clover blossom was the finest this year I ever saw, and all bee-keepers that had their bees in good condition, and gave them plenty of room, received a fine yield for a little over two weeks. Since then, for 15 days, it has been one continual Sunday with them. I never saw them cut down so, and become so perfectly idle, at this time of year.

I have been a bee-keeper for 25 years, and have never been able to overcome, to my satisfaction, three different parts of the business—changeableness of the summer seasons, wintering, and fully to prevent increase and swarming in the honey harvest. The two first named difficulties, I think no bee-keeper will contend that he can master. The swarming trouble I have given close attention for the past two seasons, and am quite sure I have made a discovery in that branch of bee-keeping that will be of value to box honey bee-keepers.

I commenced the honey harvest this summer with 61 strong colonies. From them came 27 new swarms; at the close of the swarming season I had only increased 7, giving me in all 68. I wish to test my plan fully another season, to be sure I am on the right track, then I will give my plan freely to all that wish it.
R. DART.

Ripon, Wis., Aug. 2, 1878.

◆

For the American Bee Journal.

Lecanium tulipiferæ.

Culleoka, Tenn., July 9, 1878.

I send you a specimen of those honey-dew producers, given on page 15[illegible], May number, and request that you give their name in the JOURNAL.

S. D. MCLEAN.

On page 218 of the "Revised Manual," in speaking of other sources than flowers from which bees collect sweets, I remark that I have seen the bees thick about a large bark-louse, which attacks and often destroys one of our best honey-trees. This is an undescribed species of the genus Lecanium.

In the summer of 1870, this louse, which, so far as I know, has never yet been described, and for which I propose the above very appropriate name, tulipiferæ—the lecanium of the tulip tree—was very common on the tulip trees about the College lawns. So destructive were they that some of the trees were killed outright, others were much injured, and had not the lice for some unknown reason ceased to thrive, we should soon have missed from our grounds one of our most attractive trees.

Since the date above given, I have received these insects, through the several editors of our excellent bee papers, from many of the States, especially those bordering the Ohio River. In Tennessee they seem very common, as they are often noticed in abundance on the fine stately tulip trees of that goodly State. In the South this tulip tree is called the poplar, which is very incorrect, as it is in no way related to the latter. The poplar belongs to the willow family; the tulip to the magnolia, which families are wide apart.

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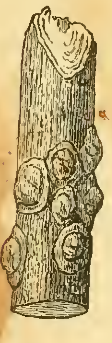

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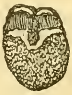

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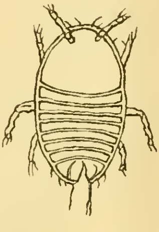

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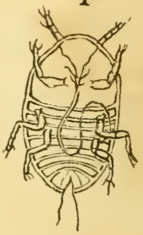

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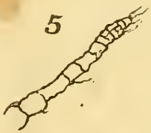

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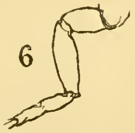


Wherever the tulip-tree lice have been observed, sucking the sap and vitality from the trees—there the bees have also been seen, lapping up a sweet juicy exudation, which is secreted by the lice. In 1870 I observed that our tulip trees were alive with bees and wasps, even as late as August, though the trees are in blossom only in June. Examination showed that the exuding sweets from these lice were what attracted the bees. This was observed with some anxiety, as the secretion gives off a very nauseating odor.

The oozing secretions from this and other lice, not only of the bark-louse family (Coccidæ), but of the plant-louse family (Aphidæ), are often referred to as honey-dew. Would it not be better to speak of these as insect secretions, and reserve the name honey-dew for sweet secretions from plants, other than those which come from the flowers?

The fact that this insect is yet undescribed; that it attacks one of our best honey trees, and is the source of a so-called honey-dew, leads me to append the following description, with illustrations; especially as this is desired by the enterprising editor of the old BEE JOURNAL, who spares neither labor nor expense in serving up the intellectual viands which he spreads monthly before American apiarists.

NATURAL HISTORY OF THE LECANIUM TULIPIFERÆ.

The fully developed insect, like all bark lice, is in the form of a scale (Fig. 1), closely applied to the limb or twig on which it works. This insect, like most of its genus, is brown, very convex above, (Fig. 1), and concave beneath, (Fig. 2). On the under side is a cotton-like secretion, common to all of the genus Lecanium, which serves to enfold the eggs. Underneath the species in question are two transverse parallel lines of this white down, (Fig. 2). One of them, probably the anterior, is nearly marginal, and is interrupted in the middle; while the other is nearly central, and in place of the interruption at the middle, it has a V-shaped projection back or away from the other line. The form of the scale is quadrangular, and not unlike that of a turtle, (Fig. 1). When fully developed it is a little more than 3-16 of an inch long, and a little more than ⅔ as wide.

Here at Lansing, the small, yellow, oval eggs appear late in August. In Tennessee they would be found under the scales in their cotton wrappings many days earlier. The eggs are 1·40 of an inch long, and 1-65 of an inch wide. These eggs, which are very numerous, hatch in the locality of their development, and the young or larval lice, quite in contrast with their dried, inert, motionless parents, are spry and active. They are oval, (Figs. 5 and 6), yellow, and 1-23 of an inch long, and 1-40 of an inch wide. The eyes, antennæ (Fig. 5), and legs, (Fig 6), are plainly visible when magnified 30 or 40 diameters. The 9-jointed abdomen is deeply emarginate, or cut into posteriorly, (Fig. 3), and on each side of this slit is a projecting stylet or hair, (Figs. 3 and 4), while from between the eyes, on the under side of the head, extends the long recurved beak, (Fig. 4). The larvæ soon leave the scales, crawl about the tree, and finally fasten by inserting their long slender beaks, when they so pump up the sap that they grow with surprising rapidity. In a few weeks their legs and antennæ disappear and the scale-like form is assumed. In the following summer the scale is full-formed and the eggs are developed. Soon the scale, which is but the carcass of the once active louse, drops from the tree, and the work of destruction is left to the young lice, a responsibility which they seem quite ready to assume.

In my observations I have detected no males. Judging from others of the bark-lice, these must possess wings, and will never assume the scale form.

REMEDIES.

If valued shade or honey trees are attacked by these insatiate destroyers, they could probably be saved by discrete pruning—cutting off the infected branches before serious injury was done, or by syringing the trees with a solution of whale oil, soap—or even common soft soap would do—just as the young lice are leaving the scales. It would be still better to have the solution hot. Whitman's Fountain Pump is admirable for making such applications.

Fig. 1 is slightly magnified; the others are largely magnified. The drawings were made from the objects by W. S. Holdsworth, a senior of the Michigan Agricultural College.

A. J. Cook.

For the American Bee Journal.

An old, old Hive.

Being told there was a hive, near here, 35 years old, I determined to see it. Accordingly a drive of 6 miles took me to the residence of Rev. W. Winn, an old settler of this county. I found him at home, and very willing to show his old hive. He said he bought it with bees in, 30 years ago, and it was 5 years old then. Says the bees have never swarmed but one season from it, and that was 5 or 6 years ago. During that summer, 4 swarms were cast off. The hive was made of black walnut, by a master mechanic, and thoroughly painted. Since Mr. Winn has had it, it has stood entirely unprotected, winter and summer, except being partially shaded by an apple tree for the last few years.

The hive consists of 5 boxes, 24 inches long by 15 wide. The lower one is plain, and 8 inches deep ; the other 4 are 6 inches deep, plain on one side and panneled on the other, with 2 glasses, 2½ by 10 inches in each box, darkened by sliding boards. Each box had a few slats nailed across the upper edge. The lumber is ¾ of an inch thick.—The top is one flat board, 1 inch thick. The boxes are held together by an iron rod on either side, fastened to the side of the lower box with a bracket, and passing up through the cover, with a bur on the top to screw down, making all tight and solid. These burs can be taken off and top boxes removed to secure surplus honey. He has never removed but one box, but has cut and taken some honey out of the next box. The 4 lower boxes have never been taken apart.—For several seasons he has used a 50 ℔. cap on top.

The alighting boards (there is an entrance on each side) are set at an angle of 60 degrees, and run together in the center, and running well down at the lower edge, giving the bees about 8 inches of surface to alight upon. It stands on 4 legs, 15 inches long, bracing out like the legs of a saw-buck.

The bees have never been fed, never showed signs of disease and have always been very numerous. They are the common black bees, but not inclined to be cross or troublesome.

Some of the combs in the lower boxes look as black as tar.

WILD BEES.

There has been a vast number of wild, or stray swarms passing to and fro in this vicinity, this year. Many "bee trees" have been found. Bees were never known to increase so much before. I know one farmer who had a few colonies last spring that increased so, he got tired of making hives and put some into nail kegs, salt barrels, old boxes, &c., but most all have prospered nicely. Besides all this, he let several swarms go away for want of care and hiving.

CATCHING BEES IN A RABBIT TRAP.

Two little boys had a rabbit trap (an inverted box) set last winter, half a mile from where my bees were kept. When the trapping season was over, they carelessly left the box setting on the ground, bottom up.—The first of July a nice colony of bees, with plenty of honey to winter on, was found in it.

Several swarms have been caught by fastening hives up in trees. One man caught a swarm of nice Italians in this way.

THE WREN AS A BEE PROTECTOR.

After the other birds had deserted my martin box, a pair of wrens took possession of it. They are now raising their brood. I have often seen one of them skipping about the bee-hives, getting upon the alighting boards, going under the hives, passing from one to another,—apparently having no fear of the bees, nor attracting their attention in the least. I think its object is to obtain bee-moths. Think it would be well to encourage these little birds to build their nests in the apiary. This may be easily done by fastening little boxes under the eaves of out buildings, to fence-posts, or in trees, as the wren will readily select such a place for her nest, and a little box suits her taste exactly.

The early part of this season was very favorable for obtaining honey; but lately, bees have been doing very little.

C. W. McKown.

Gilson, Knox Co., Ill., Aug. 5, 1878.

For the American Bee Journal.

The Wild Onion as a Honey Producer.

I write this to call the attention of our brother apiarists to a valuable plant for honey—the wild onion. If farmers can tolerate it in their pasture it would be very valuable. It begins blossoming here about July 20th, and continues for two to three weeks. I am located 6½ miles south of the court house, in Chicago, at Englewood, and at present the prairies around, as well as railroad tracks, are covered with its delicate pink-white blossom, and my bees are gathering it fast. I can smell the onion flavor coming out of the entrances blown by the busy wings of the bees ventilating the hives and thereby ripening the honey. The onion flavor thus passes off, and when the honey is ready to be sealed you could not tell it from white clover; though I extracted some of it three years ago, and my better-half always insisted that she could taste the onion flavor; probably in consequence of taking out before it was well sealed over. The blossom is borne on a single delicate stalk, size of a knitting-needle or a trifle larger, from 9 to 15 inches high, from which it drops over in a bunch of 8 to 12 small single flowers branching from the upright stalk. I do not think Prof. Cook enumerates this in his "Manual," and yet I think it very valuable, as it comes in a season when there is little else but buckwheat, and as its honey is white as clover, it is worth cultivating possibly. I should not plant it in pastures, as I presume it will give its flavor to the milk and butter, but in waste places, &c., it would help out the August supply very materially.

R. J. Colburn.

168 State St., Chicago, Aug. 2, 1878.

For the American Bee Journal.

The Purity of the Queen.

Whether or not spots and crowns upon the body of the Italian queen bees are a necessary test of purity I am unprepared to say, and have strong doubts. I have bred queens from mothers with and without spots and crowns, with equal results, to all appearance, of genuine purity. We are forced to judge of the purity of the queen more from her progeny than from the appearance of the queen; they vary so much in color.

If I wanted a queen that would duplicate herself in queen progeny, under the same conditions, I would cross with the black bee, then breed out the black blood so far as to secure a brilliant color in the daughter. The point is then gained, but the original purity lost.

I first secured the Dr. Parsons' stock (as I understand it), through the Rev. L. L. Langstroth, of Ohio, and they were indeed beautiful bees, but not so active, to all appearances, as importations since made from Italy. I herewith send you for examination a queen, daughter of an imported mother, bearing the spots or crowns of so-called genuineness, but claim nothing superior for her on that ground.

A. Salisbury.

Camargo, Ill., Aug. 12, 1878.

For the American Bee Journal.

Motherwort as a Honey Plant.

(*Leonurus cardiaca L.*)

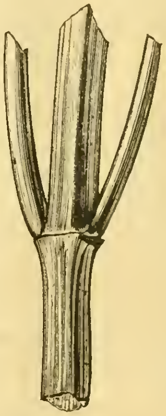


FIG 1

Perhaps none of our common herbs promises better, as a honey plant, than the one in question. It is a very hardy perennial, and once introduced in waste places, it is sure to hold its own, until it becomes desirable to extirpate it, when, at man's bidding, it quickly lets go its hold, so that it is not a dangerous plant to introduce. The blossoms appear at this place, about June 25th, and persist for a full month, and during the entire time, are crowded with bees, whatever may be the character of the weather, whether wet or dry, warm or cool, whether the plant is in the midst of honey plants or isolated. We are thus assured that the plant is constantly secreting nectar, and is also a favorite with bees. Rape, mustards, and borage seem indifferent to the weather, but are not favorites with the bees. Motherwort, then, has three admirable qualities: It is long in bloom, the flowers afford fine honey at all times, and it is a favorite with the bees. If it could be made to bloom about three weeks later, coming in just after basswood, it would have nearly all the desired qualities. I think that we might bring this about, by mowing the plants in May. I am led to this opinion, from the fact that some plants which we set back by transplanting in May, are still in bloom this August 10th, and are now alive with bees, dividing their attention with the beautiful cleome, which is now in full bloom, and fairly noisy with bees.

DESCRIPTION OF THE PLANT.

The stalk is square, (Fig. 1) branching, and when cultivated, attains a height of some four feet; though as it grows in waste places, it is seldom more than three feet.—The branches, and also the leaves are opposite, (Fig. 1 and 2) and in the axiles of the latter, are whorls of blossoms, (Fig. 2 and 3) which succeed each other from below to the top of the branching stems. The corolla is like that of all the mints, while the calix has five teeth, which are sharp and spine-like in the nutlets as they appear at the base of the leaves (Fig. 2). As they near the top, the whorls of blossoms and succeeding seeds are successively nearer together, and finally become very crowded at the apex (Fig. 3). The leaves are long and palmately lobed (Fig. 2). The small blossom is purple.

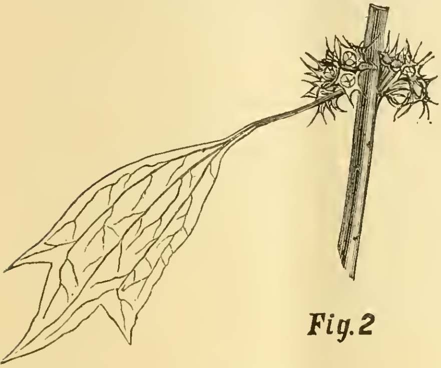


Fig. 2

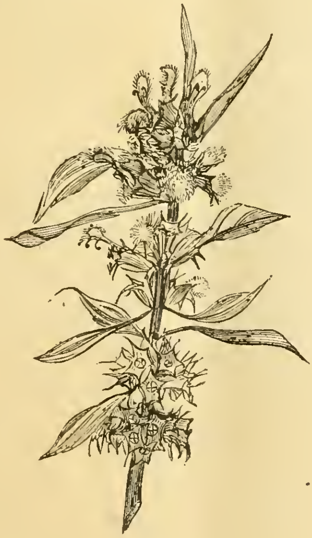


FIG. 3.

The figures were drawn from the plants by W. S. Holdsworth. A. J. Cook.
Mich. Agricultural College, Aug. 10, 1878.

For the American Bee Journal.

Standard of Purity.

Editor Bee Journal:—I am greatly interested in the question of the standard of purity in Italian bees. Of course every bee imported from Italy is an *Italian* bee, and it seems plain that there are *dark* as well as light queens imported. Nor is it fully established that *all Italian* bees are equaly good, *i. e.* prolific, industrious and gentle—or rather that these qualities do not, in any degree depend upon *color*. That is the *primary* point to be settled. If decided affirmatively, so far as color goes, we *can* have no standard for *utility*, and only one for *fancy* and *uniformity*. It seems clear to me that if it can be done without sacrificing better qualities, a standard of color is exceedingly desirable. For instance, I have purchased several so-called Italians from persons in different parts of the United States. My own bees are not of the blackest, as several years ago some Italian blood was introduced into the apiary, from which they came; still they are probably called black bees; and yet I can scarcely distinguish the progeny of an Italian queen sent me from Georgia and that of my own queens. One of a leather color from Oatman, last year, was plainly different from my own, but was lost in introducing in September last. I have now one from Alley, of a fine light leather color, larger and finer than I have before seen. She is laying and I hope to see in her a mother of bees quite different from my own. I also expect another from friend Oatman soon, and have faith that in the end I shall get my colonies *Italianized*, but will they be dark, lightish, or yellow? Who can tell? It seems to me that before we adopt a standard of *color*, we should adopt one of *value*. Are we prepared for the question? Let us have light on the *primary* question. Mrs. N. P. Coltrin.
Centralia, Ill., July 24, 1878.

[It certainly is *not* fully established that the prolificness, industry and gentleness of Italian queens "do not in any degree depend upon color!" On the contrary, we do know that the darker queens are more prolific and produce more industrious bees! Therefore the production of "the golden beauties" is usually at the expense of other esteemed qualities. The point raised by Mrs. Coltrin is "well taken"—the standard of value must determine the standard of purity. Let us have *light*, even if it turns the "brightness" of queens into comparative "darkness." Let there be light.—Ed.]

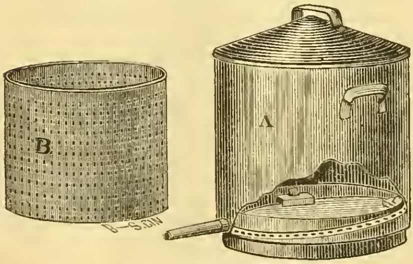
For the American Bee Journal.

Wax Extractor.

Mr. Editor:—"Please explain in the next number of the Journal how to get dirt and trash out of wax? I have a great deal of trouble with my wax, and would like to know how to prepare it without dirt or trash." A Subscriber.

Sumter Co., Ala., Aug. 9, 1878.

[First get a Wax Extractor. With it the pieces of comb can readily be made into nice cakes of wax. The boiler should contain boiling water, and the pieces of comb be placed into the comb holder and put over the boiler where the steam, coming up through the holes made for that purpose, converts the contents of the comb holder into the brightest of yellow wax. A vessel should be placed under the spout, to catch the wax as it runs out. This should have a piece of fine wire-cloth over it to strain out all remaining impurities. When it is desired to pour the wax off into pans to cool—the top of it should only be poured off, letting the "dregs" remain. Cover the pan where it is poured off to cool, so as to keep it from cooling too rapidly on the top, and thus prevent its cracking. Should the wax be burned, in the least, it is ruined. If any impurities have settled at the bottom of the pan, it should be cut off from the the cakes of wax before shipping, as such would detract from its value much more than the weight of the impurities cut off would amount to. The Wax Extractor will cost, with copper-bottomed boiler, only $5.—Ed.]



WAX EXTRACTOR.

* * *

For the American Bee Journal.

Visit to Oatman's.

Taking advantage of a very cool day in June, I drove across the country to Dundee. I had had considerable dealings with the Oatmans, and always found them very pleasant men to deal with, so I was not surprised to find them pleasant and intelligent bee-keepers. They had nearly 200 colonies of bees which they keep right in the village, every thing being kept neat and tidy about the hives, and I think I never saw any bees that equaled theirs for good nature. Although the day was so cold that I wore an overcoat all day, the bees showed no ill nature even when frames were lifted out and the queen shown without the use of smoke. Although they sell bees and queens, they seem to attach more importance to the honey crop. Their hive, the "Modest," I do not think I should like so well as the regular Langstroth, the frames being deeper, but they have a few colonies in hives that ought to satisfy the most ultra on the shallow hive question, the frames being only 5 inches deep. They say they work nicely for box honey, only that the bees persist in swarming too much. I was quite interested in seeing their plan for using comb starters in boxes, the essential part of which, although very simple, was quite new to me. Mr. Oatman showed me the operation by placing the honey box upside-down, then cutting the piece of comb about an eighth of an inch longer than the depth of the box, then running one edge of the comb through the lower part of the blaze of a lighted candle until partly melted. He put this melted edge on the place where he wanted it to stay on the bottom of the box (which, when righted would be the top), and crowded the other edge into place. It is very quickly and easily done. B. Lunderer.

* * *

For the American Bee Journal.

Visit to T. S. Bull's Apiary.

The location is pleasant, being one of the highest and most productive in northern Indiana, some 12 miles from Lake Michigan.

The country abounds in honey-producing plants, among the most important of which are white clover, basswood, buckwheat, golden rod, and the usual variety of fruit blossoms.

This apiary is situated on a gentle incline towards the south, protected on the north by a high, tight fence.

The hives are arranged in rows, about 10 feet apart, and 3 feet apart in the rows.

Mr. Bull manufacturers his own hives on his own plan. They are furnished with movable frames and also with boxes for comb honey.

In connection with his apiary, Mr. Bull has a work-shop put up especially for the manufacture of hives, and for other work connected with the apiary. Under this shop he has a cellar for storing his bees in winter. The cellar is neatly-finished with dressed lumber, and furnished with a thermometer, and also with a stove for heating when necessary. This apartment is well ventilated above the hives. Mr. B. thinks thorough ventilation and the absence of moisture are the most important requisites to successful wintering.

He appears to be a natural bee-keeper, having taken great delight when but a boy at home in watching the operations of bees, and working among them in a fearless manner; since which time he has given more or less attention to the apiary, until 1871, when he gave it his whole time and study, thus bringing his apiary to a state of perfection in scientific management. He increases his stock of bees to the desired extent by allowing them to swarm naturally, letting each colony swarm but once, which he thinks is enough when strong colonies (and consequently plenty of honey) is the object in view, as one strong colony will yield more honey than 2 or 3 weak ones, the number is of not as much importance as their strength.

Those desiring to visit this apiary are welcome at all times, and shown through the premises with pleasure.

The apparatus for making hives, pressing foundation comb, extracting honey, and the swarm catcher are novelties to the inexperienced.

Mr. Bull is a constant reader of the best books on bees: The AMERICAN BEE JOURNAL, the *Magazine* and *Gleanings* are regularly perused.

The honey harvest in this locality has not been abundant, on account of wet weather in the early part of the season and a dearth of basswood honey. During the last 3 weeks, since white clover withered, bees have stored very little honey. The prospect now for fall honey seems to be good—much buckwheat having been sown; this is just coming into bloom and bees are lively at work again. D. W. KEELER.

Valparaiso, Ind., Aug. 10, 1878.

For the American Bee Journal.

Bee Tea—a Valuable Medicine.

You have heard of the homeopathic medicine, Apis (made from the poison or sting of bees), which is a valuable remedy for bee stings. Taken internally it neutralizes the poison and removes the sometimes dangerous effects of the sting. But you will no doubt be surprised when I tell you that the poison or essence of bees, or rather bee tea, has proven a valuable remedy for a dangerous and painful disease, as it has lately done with old Dr. Hampton of this city.

The doctor had suffered, and no doubt tried every remedy known to the profession, when one night several weeks ago a colored woman aroused us and said, "Dr. Hampton wants you to put about a dozen live bees in this tin cup, and to pour hot water on them until the cup is about half full." The night was very dark, but with the aid of a light, and after being stung severely for disturbing the little fellows at such an unseasonable hour, secured the bees, and prepared them as directed.

A few days afterward I met the doctor on the street, apparently well and healthy, and asked him how the bee tea acted and what it was for. He answered very emphatically, "It acted like a *charm*. I have suffered with involuntary retention of urine; have tried many remedies, but this bee tea beats them all." And with a thankful look of gratitude to Heaven, he continued: "When the great Creator completed this great world of ours, he pronounced it *all* good, and it *is* all good, if we poor mortals only know how to use and employ the blessings we enjoy."

The doctor tendered me a thousand thanks for furnishing the bees; the pleasure and satisfaction of knowing a sufferer had been relieved, and that thousands more may yet be relieved with this simple and harmless remedy, will always be remembered with pleasant satisfaction. W. WILLIAMSON.

Lexington, Ky., July 29, 1878.

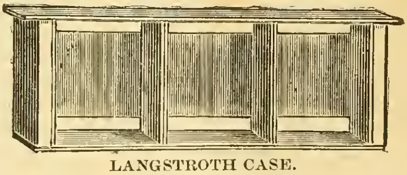
For the American Bee Journal.

Surplus Boxes.

"I have taken honey from 26 hives—over 1,000 ℔s. of comb and 100 extracted. The most from one hive of black bees is 80 ℔s., the least 22 ℔s. The most from Italians 70 ℔s., the least 35 ℔s. In the brood chamber are 9 frames, size 14¼x10 in the clear. My supers are of all kinds, nearly. I think I shall buy the 'prize boxes' for next year. I have had over 200 combs built by colonies, all straight. I used comb guides of foundation 2 cells deep, run on with a straight-edge; the same for sections, which are 2 inches from center to center; no separators; all straight, except an occasional one, when starting upwards, will make an ugly comb. Why not have the slot in the center of bottom piece of frame? Why not have paper boxes for surplus honey? properly prepared, say top piece corrugated or plain, for I took nice honey from a box with a brown muslin top; the sagging was a regular curve. Let us go to work at something light and cheap. Wire might do better; has any one tried it? Or have plain wood box, cut out honey, sell at 10-cts. a pound." PETER JAMES.

Waveland, Ind., July 24, 1878.

[The slot in the center of a "Prize Box" would come just where the comb should be fastened, and in the center of it, too.



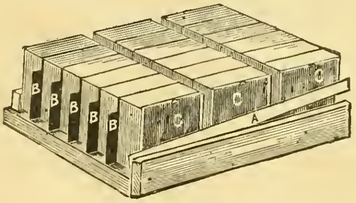
LANGSTROTH CASE.

The bottom-bar needs to be ¼ inch narrower to admit the bees and give room for glassing. Would not paper boxes cost even more than the "Prize Boxes?" We think so. Then wherein are they to be desired?

Comb-foundation in surplus boxes, used two or three cells deep, will do very well, but when more is used it is a positive injury to the market for comb honey. We have had some honey in prize boxes that contains a regular "fish-bone." Comb foundation was used from one-half to two-thirds of the way down. Our customers frankly tell us they do not want any more of it. We used some of it, and found, to our disgust, that the complaint was well founded. Therefore let us insist that comb foundation be *not* used for surplus honey, except for starters of about one-half an inch in depth.

Another lot of honey had natural-comb starters of liberal size, and so *dark* that it could be distinctly seen through the honey. This is *worse* than the use of comb foundation, for the flavor of the white clover honey was almost destroyed by the old and blackened comb used for starters. If natural comb be used in surplus boxes, it *must* be new and nice. Any other is but a damage to its sale as well as to its flavor.

"No separators"—an "occasional ugly comb!" The one is consequent upon the other. Separators are a necessity, if all straight combs are desired! And they should be one inch narrower than the boxes are in height—and that will give one-half of an inch at both top and bottom for means of communication between boxes. Some, this season, used them the right width, but had them close up to the top—giving the bees *no* means of passing from one comb to another without going down to the bottom—but the worst feature of it was the fact that as soon as the bees got below the separator they lengthened out the cells, and packing was thereby made deficient, while glassing was impossible. The right position for the separator is shown on page 311, in the cut of a case for a Langstroth hive. When the Comb-Honey Rack is used, the same relative position must be maintained. If it is desired to make the "Boxes," "Cases" or "Racks" at home, it will save much annoyance if all will take pains to procure one as a pattern, to be sure they are right, before they "go ahead." Large packages and odd sizes of boxes bring a much less price than the regular "Prize Box." That is the standard package for wholesale and retail, and it will pay *all* apiarists to adopt it.



COMB-HONEY RACK.

Wire for top-bar, with starters fastened, has been tried and it is not a success.

It is best, in shipping comb-honey, to turn the boxes on their top bar, for strength. With a "muslin top" this cannot be done.

To use a large wood box and cut out the honey would be to retrograde 50 or 100 years—and adopt a plan long since proved very undesirable.—Ed.]

For the American Bee Journal.

Standard of Purity.

Friend Newman:—I was interested in reading those articles under the above heading. Queens that will produce such wonderful results are remarkable queens indeed. My experience with the Italians covers a period of 17 years, and I have probably reared 15,000 queens, but I never had a queen to come up to the standard of purity, as pictured by several correspondents, and *they* only give it as a matter of opinion, I believe.

My experience has been, that while a queen would produce beautiful royal and worker progeny, she would not produce *three* banded drones; in fact, drones from such queens are seldom handsome. The color seems to run all one way, either to the drones or to the workers and queens.

Some 12 years ago I purchased a beautiful queen of a well-known breeder; the worker and queen progeny were beautiful, but the drones were as black as any common drones that I ever saw. Was such a queen impure? By no means, for all her young queens that were fertilized by handsome drones were as pure as their mother.

In rearing queens, those mothers that produce the handsomest workers should be used, and only handsome drones to fertilize them. Then can the standard of purity be maintained. Queens and drones from the same mother should not be permitted to mate. Like does not produce like, in breeding bees, any more than in the breeding of any other animals. Friend Moon says he has no queens that will duplicate themselves every time. I have had many such queens, and hundreds of my customers can testify to the fact. I have such queens now, and would not attempt to rear from any others. Imported queens will not do it. Their royal progeny will be almost all colors, from black to very light-colored—although I have had some that would produce a majority of yellow queens.

That all queens will not duplicate themselves every time is an established fact.—The thing is impossible. Time, and friend Newman's space will not permit us to say more now, and we will drop the subject here.

SENDING BEES BY MAIL.

Queen breeders and their customers will be put to some inconvenience on account of fresh orders by the Post Master General, forbidding bees to be sent in the mails.—The story that some one put a lot of bees in a paper box and mailed them at some office seems to me to be a very improbable one, and appears much like a put up job.—No bee-keeper can be found in the country who would attempt to do such a silly thing. Nevertheless, reports have been sent to headquarters, by some officious postal agent, that such was the fact; hence the order to shut the bees out.

I called at the post office in Boston the other day to see the postmaster there, and to get a lot of my bees that some of his underlings had detained. The postmaster being absent, I did not see him, but I learned that he knew nothing about the bees being detained there as unmailable, and reminded their clerks that there the postmaster had decided within a month to let bees pass, as he had received no orders not to receive them. I had paid letter postage on those packages, and they had no more right to break the wrapper than they have to open my letters. Government officers go on the principle that "might makes right," and so we have to put up with it. I told them that I had been sending bees through the mails for 15 years, and they had just found out that bees were not mailable. This new order won't injure the trade much, as I can find a way to get queens to my customers at very little expense. A dozen queens can be sent by expresss about as cheap as by mail, and rather more safely.

Let the bee-keepers of the country pile in the petitions to Congress until we get relief. Don't let up, until we get what we want.—Bring the subject before the Convention, in October. By the way, friend Newman, while we think of it, can't those who intend to visit the Convention to do the talking, go prepared to commence business as soon as the Convention opens? We don't want to attend another Quaker meeting, like the one last year. No one knew where to begin, and we were kept awaiting for the officers to put in an appearance. Be on hand Mr. Secretary and Mr. President, and let us have a large attendance. H. ALLEY.

Wenham, Mass., Aug. 12, 1878.

[We hope all who can will attend the National Convention, as many points of vital importance will come up for discussion. The next Convention will be in the West, as agreed at the last Convention—and thus early we inform all concerned, that we propose to try to get it appointed at Chicago, or at least in some Western city.—ED.]

Chips from Sweet Home.

Dr. N. H. Derr, has just given me a fraternal call, also an idea which I must give you, viz.: To ship comb honey in a car safely, make a strong platform 6 inches narrower and 2 ft. shorter than the car inside; have this hang 2 in. or more from bettom of car by a number of ½ in. rods attached at the top of the sides of the car and platform by cock-eyes, these would allow the platform which contains the honey to swing back and forth whenever bumped. Has such ever been tried? What are the objections to it? Would the railroad company ship our irons and platform back to us free? Would you put springs at each end; if so what kind would be best, and the cost? The platform can be made strong and cheap and given away at the end of the route; the irons can be packed in a box and returned as freight. The cock-eyes can be made with a coarse thread and screwed in the timber.

"OUR HOMES," IN GLEANINGS.

Just as you all might expect, and from past experience, I knew Novice would try to make right any wrong that he had done, so he made a correction from "Perhaps a half dozen similar letters," to "Perhaps, I should have said letters from a half dozen different persons." Now, Novice, we would still follow up and have you correct this, but fear it would take too much valuable space in the AMERICAN BEE JOURNAL; not that we fear of using valuable space in "Our Homes."

There is much of "Our Homes" that we like, and like R. Wilkin, only object to the "superstitious" part.

In "Our Homes" of July, 1877, Novice did fill it with good sense, and for once left out the superstitious part. It pleased me so well that I at once wrote him how well I was pleased, and to show my pleasure in a more substantial and lasting way, I offered him a half dozen Sweet-Home raspberry plants. In answer to which he says, on card of Aug. 1, 1877: "Thanks for offer of berry plants. Would be very glad of them." I sent them, and March 22d, 1878, he wrote me: "Accept thanks for the plants sent us. We will plant and care for them, and report in *Gleanings*, if we can remember it." O. K. Now, Novice, if you will give us an article in "Our Homes" upon being *honest, truthful*, or *having government in our families*, without any superstition, I will send you a grape vine of Early August, which ripens from the 12th to the 15th of August with us. Yesterday, August 12, we took some to Muscatine, and they were pronounced good by all who tasted and judged them. They ripen two weeks sooner than any variety we have. The vine is perfectly hardy, and never has winter-killed.—Growth of the vine is similar to the Concord. Leaf large and round. Berries larger than Concord, but not quite as good flavor, slightly foxy, bunch compact, from 6 to 12 berries in a bunch. We have none for sale, but we will send one to Novice upon the above conditions. We have written Novice three letters in reference to "Our Homes." If he will print them in "Our Homes" *verbatim*, I will send him one Early August. Novice, when you go to fill up "Our Homes," think of what three wise and good men have said, viz: Jesus.—"And as ye would that others should do to you, do ye even so to them." Zoroaster flourished in Persia about 500 years before Christ, and said: "Hold it not meet to do unto others what thou wouldst not have done to thyself. Do that unto the people which, when done to thyself proves not disagreeable to thyself." Confucius, who was born on the 19th day of June, B. C. 551, gave, among other good and wise maxims: "Do unto another what you would he should do unto you; and do not unto another what you would not should be done unto you. Thou needest only this law alone; it is the foundation and principle of all the rest."

Novice, if you had read the above wise and good sayings, you certainly would not have been so hypocritical as to say in "Our Homes" of Aug., "At the time, I was not a believer in the Bible, or at least *I claimed I was not*, and he seemed to rejoice when he had discovered the *fact*." In the fourth column, of "Our Homes" of August, Novice says: "If you were crossing a stream, and should see the water coming down all roiled and muddy, you would infer that somebody or something was above stirring it up."—While reading "Our Homes" of August, we concluded that if there were such a being as Satan, that he certainly had been stirring you up, for in "Our Homes" you were very roily and muddy, but with so much roil and mud as you there wanted to expell, you now certainly must be clear and spotless. D. D. PALMER.

New Boston, Ill.

[Dr. Derr's plan strikes us as very feasible. Will those having had experience in shipping comb-honey give their opinion of it through the BEE JOURNAL? To give away the platform and ship the irons back by freight would pay, even if the railroad companies would not ship them back free.—ED.]

For the American Bee Journal.

Bee-Killer.

After a most promising, early summer, I found again, this year, that my bees, although in the best of order and colonies strong, although they had plenty of pasture, all of a sudden almost stopped working, and evidently became less in numbers. I at once became suspicious of the bee-killers: *asilus Missouriensis*, *asilus sericeus*, *erax bastardi*, which I also found in innumerable numbers among the flowers, buckwheat, &c. It was, I think, 3 years ago when last they were here. My statements were then somewhat doubted. This year I have settled the point. This pest is now nearly gone again. After they have slaughtered the bees, and almost the day they began to disappear, my bees commenced to fly again, and my trial hive, on the scale, began to increase in weight; while, as long as the bee-killers lasted, it decreased.

This year they came about a month later than they did three years ago, probably bred by the heat of July. I am afraid that my honey crop will fall short, one-half. They were so numerous this year that killing was useless. You might as well kill the butterflies on a clover field.

CHAS. SONNE.

Sigel, Ill., Aug. 16, 1878.

For the American Bee Journal.

How shall we know when Italian bees are pure?

REV. M. MAHIN, D. D.

I have been an amateur bee-culturist for the last 8 years, and during all that time, I have had Italian bees. I have given them a great deal of attention and study. I have carefully observed bees of that race wherever I have seen them, and my own colonies have been studied so closely that I could, in some cases, tell, when I would see a bee away from the hives, to which hive it belonged. It has been my desire to have pure bees, and I have sacrificed a great many queens, and some pretty good ones to my ideas of purity.

But how can we tell when our bees are pure? I am pursuaded that this is a much more difficult matter than most persons imagine. I am very sure that in some cases the offspring of pure Italian queens, mated with black drones, are so nearly like pure Italian bees, that even the most practiced eyes are liable to be deceived. And if a half-blood queen mates with an Italian drone, her offspring will be, in most cases, as light-colored and beautiful as any full-blood Italians, and I am not sure but more so. Those who have observed the progeny of a black queen, impregnated by an Italian drone, have noticed that while a majority of the bees were entirely black, a few of them had 3 golden bands of lighter color than the average pure Italians; and my observation leads me to think that the lightest colored bees have a dash of black blood in them, but I think that impure bees are only light colored when the impurity is in the mother, and not in the father.

Some of those who have written on this subject have recommended selecting those stocks, to breed from, that have well-marked drones. I do not think it safe to follow this advice. The most beautiful drones I ever saw were the progeny of a queen whose mother was black, and whose father was an Italian. She, herself, judging by the appearance of her offspring, had mated with a half-bred drone. The drones were more uniform, and far more distinctly marked than the workers. There was not one to be seen among them that had not 3 broad, golden bands. They were such beauties as would have captivated our fancy bee-raisers, who seek to improve the color of their bees by special attention to the drone side of the house. And yet, they were not more than half Italian; so it will not do to rely upon the color of drones as a mark of purity.

If we can raise bees that are in all respects like the bees in Italy, we may rely upon their being approximately pure. But, what kind of bees inhabit that sunny clime? Are they all of one race, and of one type? I have never had an imported queen until this summer, though I have long desired to have one. I procured one, if she did not get changed by some accident for a home-bred one, imported by C. W. & A. H. K. Blood. I expected the bees to be darker than my home-bred ones, but I expected them to be uniform in color. In the latter I was disappointed. They range from a color as light as the average home-bred Italians, to a shade not much lighter than our brown bees of this country. Many of them do not show the third band when not moderately full of honey, but when filled they all show 3 bands. Are they pure Italians? If the queen came from Italy, yes. If a mistake has been made, and she is a home-bred queen, no. The bees, as to their appearance, are not like any mixed ones I have ever seen. They are easily controlled, but not as quiet when handled as Italians generally are. The queen is *very* prolific, and as honey gatherers and comb builders, especially the latter, they very noticeably excel my old stock. And as we want bees for the honey they gather, these dark bees are as good as if they were beautiful.

I have been raising some queens from my imported Italian. Three of them have been tested. One mated, I think, with a black drone; but while her bees are darker than those of her mother, there are no black bees among them, as sometimes happens when my home-bred queens, coming from lighter stocks, mate with black drones. The bees of another are larger and more uniform than those of the imported queen, the bands being more red than yellow. The bees of the third are beauties—large, uniform and bright.

I take it for granted that the Messrs. Blood are honest and careful, and that they sent me an imported, and consequently a pure queen; but I have had to change my mind somewhat in regard to the marks of purity. I have no doubt but that I have killed pure queens, thinking they were impure, and have retained some as pure that were not.

Logansport, Ind., Aug. 16, 1878.

* * *

For the American Bee Journal.

The Adulteration of Sweets.

I sent, at the same time, the petitions on the adulteration of sweets to the editors of three bee-publications. Messrs. King and Newman inserted it cheerfully, but Mr. Root did not honor it with a place in *Gleanings*. On the 3d of August, I sent him a postal card, asking why he had not published it. This was his answer:

> "I beg pardon, but the petition against adulteration of sweets did not seem to me of sufficient importance to entitle it to a place in the journal."

This petition was unanimously recommended by a vote of more than 70 bee-keepers at Burlington. It is against fraud, and in the interest of all bee-keepers.

The adulteration of honey being now practiced on a large scale by unprincipled dealers, the Legislature of Kentucky has passed laws against it. It is under all these circumstances that Mr. Root refuses the petitioners the right of being heard in his paper.

A prominent bee-keeper and honey-dealer, Mr. C. F. Mnth, of Cincinnati, after reading a copy of the petition wrote thus:

> "Glucose is the greatest stumbling block to the honey trade, and consequently to the bee-keeper.—If it is once known to the public that glucose is fed to the bees by the bee-keeper, it will work a greater damage to the honey trade than we may imagine. I was offered, last week, a sample of extracted honey, of which the party had a few barrels. I would almost swear to the fact that it was adulterated with glucose. Of whom will it be safe to buy pure honey after awhile?
>
> Mr. Root's course in recommending glucose to bee-keepers, is very reprehensible! I certainly think it very wrong in him. His course in regard to glucose is very damaging to bee-keepers."

In answer to my request for permission to publish extracts from his letter, Mr. Muth says:

> "If *Gleanings* was started to represent the interests of the bee-keeping public, it has certainly now turned into another channel!"

The last sentence is hard upon Mr. A. I. Root; but, in my opinion, he richly deserves it! By looking on the cover of *Gleanings*, every one will find the reason for the refusal of its editor to publish the Petition. Mr. Root, by advertising and extolling glucose, has created a large demand for it. He sells it by tons, (see *Gleanings* for May, page 161), at a large profit, and does not wish to stop his trade, by publishing our Petition!

An honest editor, an editor devoted to the interests of bee-keeping would have given both sides—for or against glucose! But in *Gleanings* you will find praises, but not a word against its use! According to Mr. Root, what was said against glucose in bee papers, were *mere sensational reports*. (*Gleanings* for April, page 110). Yet Mr. Muth wrote to him on the subject. I, too, at three different times, wrote to Mr. Root, that glucose contained but 30 to 40 per cent. of sugar; that 2½ ℔s. of glucose at 5 cents per pound, worth 12½ cents, given as food to bees, was not more nutritious than one pound of sugar, worth less than 11 cts.; that 3 pounds of solid glucose, that he improperly calls "grape sugar," at 3½ cents, worth 10½ cents, were equivalent to one pound of sugar, worth about the same price. Glucose is about 3 times less sugared than cane sugar. Sugar is a better food for bees than glucose, on account of the quantity of refuse matter among the constitnent parts of glucose; not even taking in account the unwholesomeness of the sulphuric acid, sucrate of lime, &c., always present in glucose!

The following will give an idea of the quantity of waste matter contained in glucose: Some American wine producers, to increase the quantity of their wine crop, mix in some glucose, dissolved in water.—The sugared particles of glucose are transformed in alcohol by fermentation. Everybody knows that alcoholic liquids are lighter than water; but wine that is made with the addition of glucose, although containing alcohol, is heavier than water, on account of the mineral water that it contains. For this reason, it is impossible to determine with the areometer, an instrument to find the specific weight of liquids, the quantity of alcohol contained in glucosed wine, and a small still has to be used for that proof.

I wrote also to Mr. Root that glucose was tried in the hospitals of Paris to sweeten the beverages of the patients, but that it was soon abandoned on account of the increase of deaths; that the use of glucose to make beer is forbidden in Germany; the beer thus made having proved unwholesome; that the manufacture of dry glucose is forbidden in France, on account of the facility of mixing it with brown sugar, &c.

Did Mr. Root publish my letters? Did he ever mention them? No! They were *not of sufficient importance!!* Yes, Mr. A. I. Root, they, and the Petition were of sufficient importance to threaten to stop your profits by sales of glucose, and that is the reason—the true, the only reason—why you did not publish them!!

Now let bee-keepers understand that we have not only to fight the adulterators, but the selfishly-interested editor of *Gleanings!* But, no matter! We shall obtain the law that is necessary to the wellfare of our business; for every honest bee-keeper will lend a helping hand, by sending for a copy of the Petition, then having it signed and returned.

Every day, I receive orders for copies of the Petition. I have already received some returned and signed. Dr. D. G. Campbell, of Keitsburg, Ill., has just returned one, signed by seventy, headed by the names of four physicians! Who will beat that?

CHAS. DADANT.

Hamilton, Ill., Aug. 14, 1878.

Constitution of National Society.

As we shall need this, as amended, to refer to at our next meeting, we will reproduce it, that all may be posted as to what it requires:

CONSTITUTION.

ARTICLE 1—NAME.

This organization shall be known as the North American Bee-Keepers' Society, and shall meet annually.

ARTICLE 2—OBJECT.

Its object shall be to promote the interests of bee-culture.

ARTICLE 3—OFFICERS.

The officers of this Society shall be a President, one Vice President from each State, District, Territory or Province represented; Secretary, Recording Secretary, Corresponding Secretary, and Treasurer, whose duties shall be those usually performed by such officers. They shall be elected by ballot, and hold their offices for one year, or till their successors shall be elected.

ARTICLE 4—EXECUTIVE COMMITTEE.

The President, Secretaries and Treasurer shall constitute an Executive Committee.

ARTICLE 5—MEMBERSHIP.

Any person may become a member by giving his or her name to the Secretary and paying one dollar, excepting ladies, who shall be admitted free of charge.

ARTICLE 6—HONORARY MEMBERS.

This Society may from time to time elect suitable persons as honorary members.

ARTICLE 7—SPEAKING.

No member shall be entitled to the floor more than five minutes in the discussion of any motion, resolution or petition, without consent of the Society.

ARTICLE 8—COMMITTEES.

All committees shall be elected by ballot, by a plurality vote, except by special resolution.

ARTICLE 9—MEETINGS.

Each annual meeting of this Society shall be held at such time and place as shall be designated by a majority vote at the preceeding regular annual meeting.

ARTICLE 10—SPECIAL MEETINGS.

A special meeting may be called by the Executive Committee at any time on requisition of five of the Vice Presidents.

ARTICLE 11—AMENDMENTS.

This constitution may be amended at any annual meeting, by a two-thirds vote of all the members in attendance.

Adopted at meeting at Cleveland, Ohio, Dec., 1871.

CONSTITUTIONAL AMENDMENTS.

Article 5, amended as follows: Any person may become a member by giving his or her name to the Secretary, and paying an annual fee of one dollar, except ladies, who shall be admitted free of charge. Adopted Dec., 1872.

SOCIETIES.

Resolved, That the President of this Society be authorized in its name and behalf, to address a circular to all the bee-keepers of this Continent, urging the formation or neighborhoos, county, state, territorial and provincial associations, auxiliary to this Society. Adopted Dec., 1872.

VICE PRESIDENTS AND SECRETARIES.

Articles 3 and 10 amended, so that only one Vice President and one Secretary are required to be elected. Adopted Oct. 16, 1877.

For the American Bee Journal.

Various Items.

The honey season is over in this section. Last season was one of the best we have had for years, but I believe the present one would have been far better but for the cold, wet weather that continued till about the 10th of June. I had become completely discouraged by the 1st of June, and thought I would be very glad if my bees made enough to winter on and give me enough for the table. After the tenth of June, we had a few pretty warm days, at intervals which bees took advantage of, and gave me about 2,000 pounds, besides laying up full winter supplies. Very little swarming,—not more than one colony in ten swarmed.

QUEEN RAISING

in such a season was of the greatest difficulty and expense. But few of the brood would hatch; many of the queens were lost in their "bridal tours," and when the hot weather set in, many colonies were ruined.

EXCEPTIONS TO GENERAL RULES

are of frequent occurrence, and I will relate one that occurred with me this season: I received an imported queen early in June, and gave her to a queenless colony that I knew would accept her, although she was in a bad condition and hardly able to crawl. They did accept her, but she died on the third day. I then gave them 3 frames of fresh eggs from another colony with an imported queen, and in 8 days after, I received another imported one; and as this was late in the evening, I thought the best way to do would be to take away the frames of brood and introduce her to the same colony. I had forgotten that I put in 3 frames, and had the impression that it was only two, so I took but two away, and then besmeared the queen with honey and dropped her in. The next day being Sunday, I only looked about the entrance, to see if they had accepted her. I concluded they had, and was right. On Monday evening I opened the hive, and the first frame I lifted was the third one that I had forgotten, with 3 perfect cells on it. Just 10 days old. I saw at once that my own bungling carelessness had destroyed such a valuable queen;—(but wait for the exception). I removed 2 cells, and then was about to close up, leaving one cell to hatch, when the thought struck me that the queen might be there yet. So I commenced searching for her, and the third frame I lifted out, *lo, and behold*, she was *all right!* Was ever a man more glad? This queen proved very prolific, but for some cause was removed last week, by the bees, after being in the hive only 7 or 8 weeks.

TWO QUEENS IN A HIVE.

I sent off a fine queen some 3 weeks ago, and not wishing to get out of stock, left the hive to start cells; in just 3 days after, I examined to know what number of cells they had started. Could not find one. I thought perhaps they had forgotten it, but would remember when too late. So I gave them a frame of fresh eggs from another hive, and in 4 days after, lifting out that frame to count the cells, I saw a large and bright queen on it, already laying. Now, if this was not two queens in the hive, what was it? It was just 7 days from the day I shipped off one, and if the other was not in the hive, then how could she be laying so soon.

MITCHELL'S PATENTS.

An agent of N. C. Mitchell came to my apiary with 2 Adjustable hives for me to put bees in. After examining the hive, I told him I had been using that division-board since 1866, and a hive similar to that since 1872, and took him out in the bee-yard and showed him. There was not a particle of iron or lugs on his division-board, except the tacks to hold the strips of cloth to the edges or sides—no rubber strips. Just so of my division-boards. I used the strips torn off of cassimere, by tailors, so there was not a particle of difference between his division-boards and those I have used since 1866. His frame, if I recollect, was 12 inches square. Mine is 11x13, inside measure. My hives are 12 inches deep, 14 inches wide, and as long as suits my convenience; some 20 inches, some 24 and 36 inches.—Mitchell's honey-boards are cloth. I use both cloth and wood at certain seasons.—Cloth in winter, and wood in summer.

Now, I would ask this question: Does a man have a right to patent a hive that another has been using for years?

I also read Mitchell's instructions to bee-keepers, given to me by the agent. He gives instructions in it how to make the division-board, but not a word about the lugs or iron legs. He only names the strips of cloth, (not rubber), the same as I have used since 1866; and I venture the assertion that hundreds of others have done the same, long before Mitchell got his patent. But if he will confine himself to his patent, in connection with the metalic legs, all is right.

COMB FOUNDATION.

I have given it a fair trial, this year. It is a great advantage, though I find many objections to be remedied yet, I find it far better to only put in the comb foundation to come half or two-thirds the depth of the frame, for when it comes to within an inch of the bottom piece, they sag so as to become rumpled and fastened to each other at the bottom, and they cannot be got out without tearing away a good deal of brood at the bottom. The only remedy I find, is to put them only half or two-thirds, till we can invent a foundation that will not sag.—And to get them straight, there should be half an inch space from the end of the frame. I find them more apt to bend and fall out the frame than natural combs. I also find the bees lengthen out the comb at the middle and bottom before they do at the top when full sheets are given. I had a swarm the last of July to which I gave full sheets of foundation, and in a few days after, another very large swarm. This latter swarm I hived without a sheet of foundation. Now the first one is full of honey and comb, very strong; the latter has built 3 combs and has about a pound of honey. Had I given the latter swarm comb foundation, I believe they would be ready for winter by this time. I tried this for an experiment. R. M. ARGO.

Lowell, Ky., Aug. 10, 1878.

For the American Bee Journal.

A Cheap Wax Extractor.

Necessity is said to be the mother of invention, and finding the necessity of having some means of extracting the wax from a quantity of comb on hand, I devised a plan which I find so satisfactory to myself that I desire to place it before the readers of the BEE JOURNAL.

Take an old, milk pan, too far gone for any further use in the dairy, and if the bottom is considerably rounded down or concave, so much the better. Punch a hole in the centre of the bottom, about one-half inch in diameter; and after placing a fragment of china, or small piece of bent tin over the hole, to prevent its being clogged by the comb falling into it, fill it with comb and set on the grate in the oven of the kitchen stove. Under the pan, on the bottom of the oven, set another pan, to receive the wax. Be careful to have only a moderate fire, or the wax will be scorched.

When the wax ceases to run, remove the pan and refill it. WARREN PIERCE.

Garrettsville, O., Aug. 19, 1878.

For the American Bee Journal.

Honey Dew.

If the article in the August number, on "What is Honey Dew?" did not contain some antiquated ideas, it would not be worth while to shed light on it. The general point sought to be made is, that all honey dew is excreted by the plants, and that the cause is a "chemical derangement," which causes them to relieve themselves, by excretion, through organs similar to those of animals. It also maintains that all the elements of sugar are taken in through the leaves.

The investigations of the last 20 years have, beyond all doubt, shown that the body of plants consists of nothing but living, or living and dead cells, according to what the plants are. These cells are very small, from 1-200 part of an inch to 1-1000 in diameter. Some few may attain a size of 1-10 of an inch. These cells are entirely closed, and join each other. They are the only organs by which plants can take in watery substances, and they do it by inhaling and exhaling, or "endosmose and exosmose;" on the same principle, as two different fluids related to each othes, if separated by a bladder, will penetrate the bladder until they are equalized. Hang a bladder with salt or sugar water into clean water, and you will soon find the outside as salty or sweet as the inside.

The flow of sap is nothing more than the mechanical effort of the evaporation of water from the leaves and younger stems.—The contents of the water cells becoming thereby more concentrated, the power of "endosmose" becomes so much stronger.—It is also settled that plants cannot take in any matter which is not soluble in water, and that very near all the water a plant uses is drawn up by the roots. This water contains in solution, salts, acids, minerals and more or less carbonic acid, hydrogin and oxygin. The upper side of leaves have not yet shown any opening through which any fluid could exude, and I defy any one to show it. The under side of leaves is generally provided with small crated openings, which lead into the spiral vessels, whose functions are the inhalation and exhalation of gases, which is far more active in day than in night time. At night, plants, so to say, sleep, and yet, at night, should they be so pressed by sugar as to burst the hard, upper surface of the leaves, to gain an outlet? On the other hand, the plant lice work principally at night.

The writer of the article in the *Home Journal* really supposes that our large forests of oak, hickory and other trees, are chemically deranged, when honey dew disappears. It would, in such a night, when the trees are in their best, be dangerous to the ears, to enter such a forest; one might come out deaf! No; Mr. K.: Honey dew is not excreted by leaves; it is, all of it, simply sucked by plant lice, who use of it what they need, which is not the sugar, and eject the surplus not by the anus, but by two fine openings above it.

I can show you, almost any time, how these little tiny insects work, and can show you, beyond the possibility of a doubt, how they eject the honey dew. I can believe what my eyes see. CHAS. SONNE.

Sigel, Ill., Aug. 16, 1878.

Central Ky. Blue Grass Convention.

The annual meeting of this Association will take place in this city, Tuesday, the 1st of October next, at 10 o'clock, a. m., when it is expected that important business will be transacted. There will be an election of officers for the ensuing year.

We hope the Editor of the JOURNAL will be with us in body as well as in spirit. If the former should fail, we shall be content with one of his interesting articles on "Bee-keeping, a Science." We cordially invite all lovers of bee-culture to be with us, and especially all the members of the Association, as we hope some prominent member will volunteer to represent us in the National Convention, which meets in New York City (I think) one week after ours.

W. WILLIAMSON, *Sec'y.*

Lexington, Ky., Aug. 7, 1878.

[Would be pleased to attend, were it possible for us to be absent long enough to attend both conventions—but it is not.—ED]

North-Eastern Wisconsin Convention.

The Northeastern Wisconsin Bee-Keepers' Association will meet at Depere, Brown Co., on Tuesday and Wednesday, September 3d and 4th.

Interesting articles from prominent bee-beepers will be read, among which may be mentioned, "The management of the home market for honey, both comb and extracted," by H. P. Sayles, of Hartford; "Wintering bees, and carrying them safely through the Spring in this Northern climate," by James Heddon, of Dowagiac, Mich.; "Best method and time of increase," by Crowfoot Bros., Hartford; "Best management of bees for the production of comb honey," by Fred. Claussen, of Mishicott.

Legare Potter, of Sherwood, and Edwin Pike, of Boscobel, will also read articles, and we hope for one from A. H. Hart, of Appleton.

Blanks will be on hand for filling out, whereby we may get an accurate statement of the number and amount of bees, honey, etc., in the state, and prices settled accordingly.

A cordial invitation is given to all to come and bring anything new of interest to the fraternity. FRANCES DUNHAM. *Sec.*

OINTMENT.—"I will give you a receipt that I have been in the habit of using for years, viz: Good yellow beeswax or nice, white comb, one part; fresh butter, well washed, 4 parts. Melt, skim and pour in moulds, which makes it handy for toilet purposes, or in boxes. It is excellent for any dressing where ordinary ointment is used. Have had some bad ulcers healed by its use; but, for the hands and lips, it is not surpassed." DR. J. R. PRATT.

Our Letter Box.

Roseville, Ill., July 30, 1878.

"We would like to hear how bee-keepers manage their work who have several apiaries to care for. We have 85 colonies 5½ miles from home and send a hand over daily to care for them during swarming time. Wish we could hear from several who make $1 queen-rearing a success; just how often they give comb, brood, &c., &c., as it seems to me honey pays me better than queen-rearing, unless I can find a labor-saving way of doing the work." L. C. Axtell.

Collins, Ill., Aug. 1, 1878.

"When is the best time to transfer bees from box hives to obtain the most honey and give the bees time to procure sufficient supplies for wintering?"

M. A. Newman.

[The best time is early in the season when there is but little honey in the hives. It may be done on any warm day when the bees are actively engaged in storing, before the fall honey harvest.—Ed.]

Hastings, Minn., Aug. 8, 1878.

"Bees have done very poorly for the last 3 weeks, but we are looking for a big yield of honey yet this fall. Last season I had colonies that made 75 pounds of surplus honey after July 20. The flowers on our bottom lanes are just beginning to bloom. Last year they were 2 weeks earlier; they usually produce a large amount of honey. Should they fail this year, the honey crop in this part of the State will be short.

Wm. Dyer.

Knoxville, Iowa, Aug. 3, 1878.

"Enclosed I send you stem and flower of a plant that abounds here. Bees work on it from morning till night, not only on the flowers, but on the leaves and stem. What is it? Bees have done very well, so far, this season. They are quiet now. The fall harvest promises to be good."

A. M. Crosby.

[This is *Cassia Chamœrista*, or partridge pea. This is a leguminous plant, and a near relative of the Judas tree, or redbud; but it is an annual. It is certainly a beautiful plant.—A. J. Cook.]

Pike Co., Ky., July 28, 1878.

"Bees have swarmed but very little here this summer. A great many about here have their bees in log gums, and very few frame hives are used. I have 35 colonies in frame hives, made large with 4 honey boxes on each, holding 16 ℔s. They have all been well filled, making 64 ℔s. of box honey to the colony. I take only box honey from my bees. Wintered out doors last winter without the loss of one colony. My hives have an entrance at each end with slides to shut out the cold, and making it warm enough for them in the spring. I raise one of my slides for the bees to go to work; when it gets warm enough I raise both slides. It seems to give the little fellows much comfort for the air to circulate through. We hive when it is very warm, and when they are crowded with bees. I made 10 swarms, all of which did well; nearly all filled their boxes and have plenty to last them through the winter. They are now idle for the first time this season. The poplar bloom this year has been good. Honey dew has been plenty. We have had no linn bloom this year, but every other bloom has been good. My bees are all blacks. I have them scattered about over my orchard, so I have no trouble making my swarms.

Julius C. Williamson.

Reynoldsburg, O., Aug. 6, 1878.

"I am well pleased with the Bee Journal. I don't see how any one can do without it that intends to handle bees; it is the best I ever read, and I have read several. I have 25 colonies of bees in the N. C. Mitchell hive, all doing well. I am using the Bingham smoker; have sold several of them; all give good satisfaction.

Bees swarmed here late on account of the cold weather in May, but did well through June and July. I have swarms that came the 15th to 20th of June that has made 20 to 25 pounds of surplus honey. Is it best to put bees in the cellar or leave them on the summer stands? S. M. Oldham.

[The cellar is best for a northern climate; but some winter with success on their summer stands. If the latter, they should be prepared by being packed in straw, and provided with a plenty of honey to winter through in safety.—Ed.]

Nashua, Iowa, Aug. 14, 1878.

"This has been the poorest honey season I have ever yet known, and I have been in the business 10 years. There is the greatest demand for honey in fancy shape this season I ever knew. I cannot begin to fill the orders for honey at 20 cts. per ℔. in my new 1¾ ℔. sections. Will send you one of my crates with 12 of my boxes filled with honey after the fairs are over. Melilot clover is a No. 1 honey plant. I have had some experience with it this season; will sow about 10 acres more."

E. J. Schofield.

Glen Rock, Pa., Aug. 2, 1878.

"The Journal and honey pamphlet came to hand in due time; I am much pleased with both. Please give the following strange freak of a virgin Italian queen to the readers of your good Journal. On the 25th of July the queen left to meet the drone, no eggs or larva being in the hive, the workers followed her. After flying for some time they clustered. I put them back in the hive, thinking they would stay, but they immediately went straight to the woods, and I gave myself no further trouble. On the 29th my queen with their little band of workers came home. They came the same course that they took when they left, four days before. It must have been my queen for there are none raised except one place 6 miles in the opposite direction my queen took going and coming. On their return they clustered again, and I put them back, giving them some brood. They have given me no trouble since. I have now introduced the queen into a full colony, and await further developments. Has any one seen the like before? J. H. Bupp.

[It is not strange that the bees should go with the queen on her bridal excursion, when they have no brood left in the hive.—They often do it. The only thing strange is her return after so many days. Still, this sometimes occurs. Mr. L. Chandler reported such a case only a few weeks ago. Others have reported the same thing.—Ed.]

Palestine, Ind., Aug. 5, 1878.

"Friend Newman:—While reading the August number of the Journal I saw an article headed 'A Young Man's Experience,' and I began to think he commenced in a way similar to that I did. In 1873 I purchased 'Quinby's Mysteries of Bee-Keeping,' and this I read and re-read until I had almost committed it to memory. I now had a good book but had no bees to practice what I had learned. I finally purchased a colony in an old box hive, and being late in the spring I did not transfer them that season. The next year in June I divided them, and I then had two colonies—one in a Quinby and the other in a box hive. In the fall I found a 'bee-tree,' which I cut and saved. While this was going on, I was looking in every paper I saw, for an advertisement of some bee-paper. At last I found one; it read like this: '*National Agriculturist and Bee Journal*, 3 months for 10 cts.' I immediately sent the amount, and received three numbers of the paper. In this I saw the '*Bee-Keepers Magazine*' advertised, and immediately sent for it one year. In the *Magazine* I saw the American Bee Journal advertised, and sent for it one year, and can truly say it is the best bee-paper I have taken.

I now have 34 colonies of bees, all in movable frame hives—some in the Langstroth, and some in the Improved American. I intend to use all Langstroth hives next season. I intend to go to the 'Exposition' at Chicago this fall, and will visit your 'Museum.'

This has been an average season here for bees; linn lasted but a few days. We never get much honey from linn on account of wet weather. Success to the Journal.

M. E. Loehr.

Lincoln Apiary, Mich., Aug. 11, 1878.

"I have been a bee-keeper for 25 years. Bees have done well here until this season; spring opened a month earlier than usual; bees wintered well; March and April was fine; bees were raising brood fast until the first of May, when it set in cold and rainy. About the middle of the month we had several hard frosts which injured the red raspberry very much and killed the basswood blossoms entirely. The first swarm I had was Jan. 28, and they are swarming yet; I had a large swarm yesterday; they are making honey now faster than they have before this season. I hardly know what to do with the swarms that come out now. I would cut out the queen cells but they are crowded from top to bottom with bees. I never saw so many bees and brood in the comb; they are full, outside cards and all. I have not taken any surplus honey yet, although I could from some of them. I think I shall give it to the late swarms. Bees generally do well here all through this month and until the middle of September.

Well, I have just been out looking at the bees. It is about 9 o'clock in the morning, and I never saw bees working stronger than they are this morning, and have been for the last 2 weeks. They are at work on buckwheat and fire-weed, and another weed that I do not know the name of. It grows about 4 feet high and has a pink blossom. It blossoms up and down the stalk for 2 feet; when ripe it has a pod which is full of cotton. I would like to know the name of it. Bees make honey fast from it. I send you a sample of it that I may learn what it is.

We have a great many honey plants here. The red raspberry is abundant; blackberry, basswood, &c. The great trouble is in wintering. Last winter was an open winter, but generally we have steady cold weather and deep snow. I wintered successfully last year, and a year ago last spring I had 25 colonies, some of them weak. They swarmed too much in the fall; I had 75 colonies. I got 700 pounds of extracted honey and 400 pounds of comb or box honey. I had no extractor of my own; I borrowed one and took this amount from them at one time. One man in the next town from me extracted 1,200 pounds from 35 colonies. He started in the spring with 12 colonies. That is what bees will do here if well managed. L. Reed.

[The plant sent us was *Epilobium angustifolium*, or the willow herb. To receive 700 pounds of extracted honey, and use a borrowed extractor seems to us rather peculiar, unless you divided the proceeds with your neighbor.—Ed.]

Chicago, Aug. 5, 1878.

"Last spring Messrs. Thomas G. Newman & Son. very generously made me a present of a nucleus colony of Italian bees, and very thoughtfully ordered them from the Rev. A. Salisbury. In due time they came to hand, were transferred to a North Star Hive, and upon the arrival of fair weather and floral facilities, entered upon their career as a colonized community; and although I had charge of the apiary connected with the American Bee Journal, I removed these to my residence for experiments, to determine possibilities as well as settle probabilities. They were placed in my back door-yard, close to the walk traversed perhaps a hundred times a day. The queen was so handsome and prolific, the bees so large and beautiful, and their dispositions so amiable and industrious, that our bees in the back yard soon became to be recognized as much our pets as those which were in the house. From the one small frame and its few bees, and the large queen, we have already 2 North Star Hives, with their 10 frames each, full of large, bright, triple-banded bees, and 1 frame of eggs, larvæ and brood in a nucleus, from which to raise a queen for a colony received from Michigan, besides having strengthened said colony with 2 large fully-packed frames of capped brood. Almost 2½ colonies of bees from 1 small frame and 1 monstrous queen! Is it any subject of wonder that the young folks of the neighbors have engendered the superstition that we have a new kind of bees that cannot sting;—from seeing us bareheaded, sleeves rolled up, females and all, grouped around our hives, lifting out frame after frame, while the bees in clouds sported around us on the wing? Never but one of my family stung by them, and that my youngest, who, inadvertantly, placed his hand upon one alighted on the plank walk, and who, instead of blaming the bee, commiserated having hurt it. Mr. Chandler, an old bee-man, said, were the queen his, $50 would not buy her. I have handled many imported queens this season, and many fine ones held at fancy figures, but none for which I would exchange her." C. C. C.

Detroit, Mich., Aug. 15, 1878.

FRIEND NEWMAN :—My nephew, Chas. Benton, Hubbardston, Mich., writes that the comb foundation you sent him arrived all right, and is very satisfactory. He says, "It would pay to buy a car-load." The smoker and comb foundation sent here arrived very promptly." FRANK BENTON.

[Comb foundation is a grand success, and will soon be universally used.—ED.]

Valley Mills, Texas, Aug. 8, 1878.

"I have been taking the AMERICAN BEE JOURNAL for several years. Can't well do without it. I have handled bees for 40 years in the old fashioned way, but I am now going to turn a new leaf in that line.—Bees in this vicinity wintered well, but have no surplus, as yet, and I fear will not have this season. This has been, so far, the poorest honey season I ever saw in any country. It makes me wish that I was able to get and try the Italians, and see if they could find honey to *spare* in extreme wet and dry weather." A. M. BARNETT.

Boundary City, Ind., Aug. 17, 1878.

"I do not see how any one can do without the BEE JOURNAL and be successful with bee-culture. I have 17 colonies now; commenced in the spring with 8; all Italians.—In June and July they did well. I had one colony on the scales in June; the most honey gathered in one day was 5 lbs.—the least, 2 lbs. During June they gathered 105 lbs." D. K. KNOLL.

Charles City, Iowa, Aug. 21, 1878.

"I have some things to suggest to accompany that queen stand, illustrated in the last JOURNAL; one is, a leather sheath on one end, to carry honey knife in; another is, a place to slip some turkey quills in, and another, a little tin box or pocket on one end, to carry some cotton filling or rags in, to use for smoking the bees; still another, a little post put on one end a little higher, with a hook or pin to hang a smoker on.—Bees have done very little making surplus honey here, this season. Not more than half of the basswood trees budded this year, and these buds were blighted and dropped off the first thing, which was about July 12th. I have made 22 new colonies from 40 in the spring. Those that did not swarm in June, got some honey. My best hive for box honey gave only 40 lbs." L. SUTLIFF.

Sumner, Ill., Aug. 21, 1878.

"Is there a strain of pure Italian bees without the yellow bands? Some here assert that there is." W. EMERICK.

[The three golden bands form the badge of purity of Italian bees. German or black bees are found in Italy, but to call them Italians would be about like calling a cat that happened to be born and reared in a stable, a horse! The German or black bee is a distinct variety, and is found in almost every civilized country. While the Ligurian or Italian bee is a native of a province of northern Italy, south of the Alps. These monntains kept them for ages a distinct variety from the German bee. They were afterwards developed in "sunny Italy" to the variety now known as Italians.—ED.]

Paoli, Ind., July 24, 1878.

"I wish some reader of the AMERICAN BEE JOURNAL who has tried the Alsike clover as food for stock would state if it is as good as the red clover. I have a lot that I wish to sow in clover, and if the Alsike is good for food I will sow it, as it will help my bees along too.

"The honey crop in May and June was splendid, but I don't think the bees have made a living since June." B. M. LINGLE.

[Will some one who has had experience with alsike and red clovers please give their relative merits for fodder?—ED.]

Connersville, Ind., July 29, 1878.

"I began this spring with 7 colonies in Langstroth hives, and am delighted. I have increased to 11 by natural swarming. I have colonies that made 75 lbs. of comb honey each during June. I like the Langstroth hive. I think the JOURNAL 'THE BOSS;' It is the first paper I read." J. H. RILEY.

Point Coupee, La.

1. What is the best remedy for the disease known as foul brood? 2. How do you wax the inside of barrels to contain honey? 3. How late in the season is it safe to extract honey in this latitude? "CREOLE."

[1. For answer to this question, see July No., pages 212 & 241. 2. See July, page 233.

3. You can extract with safety at any time, if the hive is too full of honey to allow the queen room to lay her eggs. "Time" cuts no figure in the calculation—the condition of the colony is the only safe guide.—Late in the fall, if the colony has more than 30 lbs. of honey, it will be safe to extract it, as that it sufficient for wintering.—ED.]

Business Matters.

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We do not send goods by C. O. D., unless sufficient money is sent with the order to pay express charges both ways.

When ordering Extractors, give outside dimensions of frame or frames to be used, length of top-bar, width and depth of frame just under top-bar.

In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additions can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us three subscribers to THE AMERICAN BEE JOURNAL with $6.00. Premium Queens will in every case be tested, but not sent till after July 1st.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce. Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Our answer to all who ask credit is this: We sell on **small** margins, and cannot afford to take the risks of doing a credit business. If we did such a business, we should be obliged to add at least 10 to 20 per cent. more to our prices, to make up for those who would never pay, and to pay the expenses of keeping book-accounts with our customers—this we know our **Cash** customers would not think to their advantage.—This rule we must make general in order not to do injustice to any one. The cash system gives all the advantage to cash customers, while the credit system works to their injury. In justice to all we must therefore require **Cash with the order,** for all Apiarian Supplies.

☞ For *nice* Comb Honey, in Prize Boxes, we pay the highest market prices.

CHOICE ITALIAN BEES.—We have a few colonies of choice Italians for sale at $10.00 each. To be delivered in October.

☞ Instead of Queens from Tremontani, we can only get promises. We sent him the money by draft on Paris more than 4 months ago.

☞ Sutliff's Smoker has been improved by the addition of a valve, which opens of itself when it is thrown down, and is always closed when being used. [Friend Sutliff says some have an idea that it requires both hands to operate it, and wants us to correct it. It is intended to be operated with the left hand, but it will take some practice to be able to use it with ease.

BEE-CULTURE; or Successful Management of the Apiary, by Thomas G. Newman, editor of the AMERICAN BEE JOURNAL.

This is the title of a new pamphlet of 80 pages, which has been carefully prepared for beginners who desire a cheap work, but one up with the times, to familiarize themselves with the fascinating avocation of the management and care of bees.

It is published both in the English and German languages, and is beautifully illustrated. It is cheap, the price being only 40 cents for it, in either English or German.

It embraces every subject that will interest the beginner. Commencing with a short chapter on the Natural History of the Honey Bee, it passes to the consideration of the Situation, Stocking and Arrangement of the Apiary, giving minute details of the management and manipulations necessary to make Bee-Keeping a success. It describes all the newest discoveries in the art, by which the production of delicious and health-giving Honey is obtained, as well as how to prepare it for the market in the most attractive shape.

Convention at New Boston, Ill.

The Western Illinois and Eastern Iowa Bee-Keepers' Society, will meet at New Boston, Mercer Co., Ill., Wednesday and Thursday, October 2d and 3d, 1878. All are cordially invited to attend our Convention, and bring anything that will be of interest to bee-keepers, such as hives, extractors, smokers, boxes, honey-knives, bee-veils, honey, tools, etc. What may seem OLD to you may be NEW and of interest to others. Reduced rates will be given at hotels. The meeting will commence at 10 o'clock a. m. Several valuable prizes will be given away to *members present.* ☞ Membership fee, 50 cents; Ladies free.

D. D. PALMER, *Pres't,*
New Boston, Mercer Co., Ill.
WILL M. KELLOGG, *Sec'y,*
Oneida, Knox Co., Ill., and Oquawka, Ill.

THE AMERICAN
BEE JOURNAL
Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, OCTOBER, 1878. No. 10.

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OUR LETTER BOX:

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Editor's Table.

☞ Salicylic acid is said to prevent honey fermenting when used in the proportion of one-fourth of an ounce of the acid to 30 pounds of honey.

◆

☞ All that is necessary to create a demand for honey is to place information before the people. Get some pamphlets, "Honey as Food and Medicine," and scatter them among your friends, and a demand will, no doubt, spring up that will take all your surplus honey to satisfy. Try it and see.

◆

☞ Friend Ira Wilson, of Lodi, N. Y,, says that Mr. Miller, in that vicinity, has patented the Quinby hive, and asks if he can collect a royalty of those who have been using it for years. The Quinby has been before the public too long to be patented at this date. Friend Wilson need not hesitate to make and use them, if he desires.

◆

☞ In shipping honey, be sure to turn the top bar downwards ; this will often save it from being broken down and leaky. Many boxes or sections are not built quite down to the bottom bar. In transit these will be almost sure to break down if shipped the same way up as when standing on the hive.

Lessons from the Statistical Table.

Two hundred persons reported having 8,200 colonies last fall, sustaining a loss in wintering of one-fourteenth, or 649 in all. The increase on these have been 66 per cent., making a total this fall of 12,474 colonies—an average of 63 to each person.

Five-elevenths were wintered on the summer stands (3446), but only one-third of these were packed in chaff (1273). The winter was an open one and wintering on the summer stands was preferable.

Now as to the results: there were 150,000 pounds of comb honey produced, to 238,000 pounds of extracted—⅜ of comb to ⅝ of extracted—by the 12,000 colonies reported. This gives an average of only 32 pounds per colony, showing it to have been on the whole an exceedingly poor year. The cold, damp spring, with other detrimental periods, cutting off much of the honey gathering.

The wax secured being only a quarter of a pound to each colony. It seems to us that Thurber & Co. will have a poor show to get the ten tons per month to supply that Candle house in Europe.

☞ Last month we suggested that the National Society should be requested to offer medals as prizes to be awarded in its name, at the honey and bee shows of the different State and district Associations within its limits. We requested bee-keepers to send us their opinion of the suggestion. The reponses have been universally in favor of it, and we have no doubt but that the National Society will give the subject their best attention.

Penny Packages.— We have received a case of six of J. H. Martin's new boxes for putting up pure candied honey for the children. They hold 4 ounces of honey and sell for 10 cents each. The box is made of hard wood, coated inside with paraffine; a label with cut of a queen bee is on the cover, and a stinger which is suddenly thrust against the finger if you persist in fooling with the tail which projects from the side of the box. After the stinger is sprung it can be reset by pushing in with the thumb nail, and used again. Those who want to create a market for their candied honey should send to Mr. Martin for his circular and get some boxes, and see what can be done in that direction.

What shall the Harvest be?

Saugatuck, Mich., Sept. 18, 1878.

Friend Newman:—Now that the fall crop of honey has been gathered, and bee-keepers are contemplating how best to dispose of their honey, would it not be well for you to give us in your October issue, in as concise form as possible, the outlook for the honey market, especially in Chicago? What may we expect from California? How will their crop affect us? And as nearly as data will allow, let us know how the crop is in each of the principal honey-producing States, and how prices will range. In this immediate vicinity white honey is very light, but during the first week of this month bees did " immense" on golden rod.

Walter B. House.

The honey market in Chicago is good. Prices are ruling lower than formerly, but the demand is increasing steadily. Light honey, in neat single-comb packages, will sell readily. The producer finds ready sale for all that is put up attractively. As the cold weather approaches, extracted honey will be more in demand.

All the good honey produced this year can be sold readily; that of poor quality only will drag. California will help us out a little but her crop is mostly "extracted." Manufacturers are using the extracted more than ever, and we think the "show" for it is excellent. As to prices, the curious can compare them by the aid of the Honey Market in another column.

☞ Friend W. H. Ware, Bayou Goula, La., suggests, that the next meeting of the National Society, shall be in the West, and the following one in the South, either in July or Dec. and adds:

"I am sure that such a plan would meet with substantial approval and support from our bee-keepers in the south, and would do more than anything else, to encourage and develop the bee-keeping interests throughout the whole country. I think well of your suggestions, that the National Society inaugurate an exhibition of manipulations with bees, as well as of apiarian supplies, and honey. Now, in case this plan should be adopted, and a meeting held in New Orleans, I will donate say, 6 colonies of pure Italian bees to be used on the occasion, and then to be sold to the highest bidder, for the benefit of the society."

Sundry Questions and Answers.

Sedan, Kansas, Aug. 24, 1878.

Will a nucleus colony grow into a full one the first season, under favorable circumstances?

What course should I pursue to secure the greatest number of good, strong colonies from one, in a single season?

RICHARD S. TURNER.

[Yes; a nucleus colony will grow into a good strong colony, under even ordinary circumstances.

To secure the greatest increase, practice division of the colony, according to directions given in a good manual. We have too often described the manner of doing it to warrant our taking up space of the JOURNAL for a repetition.—ED.]

Council Grove, Kan., Sept. 16., 1878.

I enclose a flower for name. It equally shares the attention of the bees with golden rod, and blooms profusely.

D. P. NORTON.

[This is a species of *Eupatorium*, or Boneset. It is illustrated in the Manual, page 241.—A. J. COOK.]

Mineral Point, Mo., Sept. 7, 1678.

Please find a flower that bees work on and is very abundant here in uncultivated fields. Please give the name in the next issue of the JOURNAL, and say if it is a good honey plant.

E. B. DAY.

[This is a Eupartorium or boneset. It is figured in Manual page 241. All of the Eupatoriums are excellent honey plants.—A. J. COOK.]

Please name this flower.,

M. H. MILSTER.

[Eupatorium or boneset, figured in Manual, page 241.—A. J. COOK.]

Ligonier, Pa., Aug. 16, 1878.

Enclosed please find an insect, found on a cucumber tree that stands in a field. The bees are on the tree from morning till dark, and you can see a mist falling from it. The leaves are covered with a sweet substance like honey-dew. I send it to you to name.

WM. ASHCOM.

[The insects are the same as described in September AMERICAN BEE JOURNAL, page 308, or Lecanium tulipiferæ. It is not strange that they should also infest the cucumber tree (magnolia acuminata), as it belongs to the same family (magnolia) as does the tulip tree, Liriodendron tulipifera.—A. J. COOK.]

St. Mary's, Ind., Sept. 7, 1878.

I enclose a small branch or two of a weed that grows very extensively here. It is considered one of the greatest pests as a weed. It is a perennial, and takes possesion of ground very rapidly. I find the bees working very extensively on it to day, for the first time in my life. Please give the name and its uses, if any.

Long live the AMERICAN BEE JOURNAL and its Editors, with the addition of health and prosperity.

THOMAS J. WARD, J. P.

[This is a Solidago or golden rod. I cannot give the species without more of the stem, but I presume it is the very one figured on page 243 of Manual.—A. J. COOK.]

☞ Much of the Honey this season is very *thin* and watery, and needs a good deal of ripening to make it fit for market. If not ripened, much of it may spoil in the fall.

TO STRANGERS VISITING THE CITY.—The *Madison street Cars* pass our office every minute of the day. We will always be glad to see you, and if you are interested in bees or honey, you will neither regret the journey nor time occupied in looking over our Museum.

FRIEND NEWMAN: Our little "Chip"—whose advent you put in A. B. J.—passed to the other life last night.

D. D. PALMER.

New Boston, Ill., Sept. 16, 1878.

"We deeply sympathize with friend Palmer—surely all "chips" do fly away. May this one "rest in peace" on "the evergreen shore."—ED.]

☞ So far, no one has dared to take up the gauntlet thrown down by friend Moon, in the last JOURNAL, about queens duplicating themselves.

The "Old Reliable" abroad.

The following letter speaks for itself:

> New York, Aug. 9, 1878.
> "An order for Honey from Algiers, in French Africa, is just received, and the letter says that our address was obtained from THE AMERICAN BEE JOURNAL. H. K. & F. B. THURBER & Co.

It is with much satisfaction that we point to our extensive and wide-spread circulation, as an evidence of the fact that the *old* AMERICAN BEE JOURNAL has lost none of the prestige or influence created for it by its late lamented editor and publisher, Mr. Samuel Wagner.

Not only is the BEE JOURNAL a welcome visitor at thousands of homes, embracing every State and Territory of the United States, but also in the Canadas and States of the South American Continent! It leaps the bounds of the Oceans, making regular visits to England, Scotland, Wales, Germany, France, Austria, Italy, Belguim and other European countries. It meets a hearty welcome in Africa, as may be seen by the above letter. Flying past the great African desert, and the glories of Ancient Egypt with its interesting Pyramids, and Palestine with its many sacred places—beyond the Indian Ocean it plants a "Star of Progress" in that vast continent of Australia—and then, pointing to the refulgent light of science enveloping with a halo of glory, that insect whose fame reaches back to the natal-day of our planet, as well as pointing forward to the glory of the enlightened "world of the future"—it bounds back to

"The land of the free, and the home of the brave."

—rejoicing in the fact that its patrons and friends encircle a world,—while "the Sun never sets" on the lands embraced in its sway—

"Visiting the shores, one by one—
Nearly all beneath the Sun."

It is exceedingly gratifying to remark that the depression, which has been so wide-spread, has not materially hindered its steady, onward course. From year to year it has enlarged its size, improved its matter and gained many new friends. All this is the result of energy and determination. For when others fainted by the way it has made fresh efforts and branched out—ever keeping in view its one grand object—that of furthering the interests of honey-producers by losing no opportunity offered to create a demand for this God-given sweetness, opening up new avenues for its use, and thus benefiting its patrons.

Another departure may now be announced. On and after the beginning of next year the price of the JOURNAL will be $1.50 per year, instead of $2.00 as heretofore. Clubs of five will be sent for $5.00, cash in advance. Subscriptions will be received at once at the new price for next year.

Cans for Honey.

Lake Village, Ark., Aug. 26, 1878.

MR. EDITOR:—Please inform myself and others through the A. B. J. what would be the cost, in Chicago, of packages for honey, holding respectively: 5 lbs., 10 lbs., 25 lbs. and 50 lbs; such packages as were exhibited at the Los Angeles convention, May, 1878.

J. B. TALLMAN.

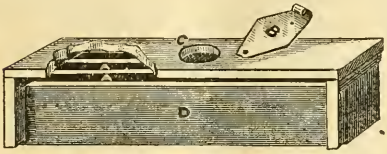
Such packages, in this city, would cost about as follows: to hold 5 lbs., round, 15c.; 10 lbs,, round, 20c.; 25 lbs., square, with screw top, 40c.; 50 lbs., 60c.; and 100 lbs., $1.00.

☞ A few days ago, one of our callers assured us that he had a neighbor who invariably closed up all the entrances of his hives every Saturday night, and kept them closed till Sunday night, to prevent his bees from "working" on Sunday!! To be consistent, he should remain in the house all day Sunday, and *fast*, else some one will have to *work* to get his food and keep him warm in winter! Surely, "superstition" and "cruelty" go hand in hand!

☞ The drawings of the Bee Enemy, —*Phymata Erosa*—on page 343, were made by Mr. Sherman Upton, of the Sophomore Class at the Michigan Agricultural College. The engraving by Baker & Co., of this city.

Shuck's Bee Feeder.

This is a convenient arrangement for feeding bees at the entrance of the hive, and is shown accurately by the accompanying engraving. The feeder is placed on the alighting-board, with the side (D) nearly covering the entrance. In the engraving, the top is cut away to show the wood divisions (A A) in the feed-cup; the food is poured into it, without removing, through the hole (C), which is covered with wire-cloth below, to keep the bees from annoying the person pouring in the feed. When this is done, the small cap (B) is closed over it, making all tight and secure. It can be used on any hive, and for outside feeding we think it has no superior. The food can be reached only by the bees from within, and, consequently, there is no danger of robbing from its use. It can be obtained at this office.



STINGS.—Russell Bliss, of Earlville, Ill., inquires the best means of preventing or curing bee-stings. The best means of preventing bee-stings, is to keep out of the way of the bees. The best means of curing them, is to immediately take a fresh tomato leaf, crush it, and rub upon the part stung. The pain will disappear immediately and without the slightest trace of swelling. This is an infallible cure—insuring perfect "Bliss!"

☞The busy season will soon be over, and friend G. M. Doolittle informs us that he will, in October, resume his valued correspondence to the AMERICAN BEE JOURNAL. An article from him may be expected in every issue during the winter, for he intends to give the JOURNAL his exclusive attention hereafter.

☞Let all who can, attend the Convention at New Boston, Oct. 2 and 3. See full notice in BEE JOURNAL for Sept. Mr. O. Clute, of Keokuk, an accomplished scholar and fluent speaker will be present and favor the Convention and citizens of New Boston with a very interesting Lecture on "Honey." This will be a treat, and should call out a large attandance. We regret not being able to be present.

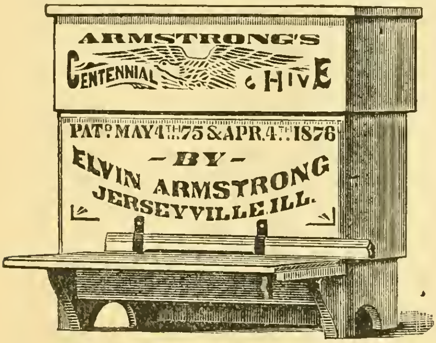
☞H. Scovell, Columbus, Kansas, has sent us a drawing of a new Smoker that he is experimenting with. He has made a model, which he says works like a charm. The fire box is enclosed in a larger tube with air space between to keep it cool enough to handle. This is held in place by springs. As the heat will soon destroy these, some other device will be necessary. It is fed entirely at the large end of the tube. If he finds it a success, our readers will no doubt be treated to a "picture" of it, though its form will be similar to other Smokers.

☞We have received two samples of the new style comb foundation, one from Mr. O. J. Hetherington, and one from Mr. J. H. Nellis. It is in appearance, simply "immense,"— the most beautiful thing we ever saw. Have placed some of it in our hives, and have no doubt it will completely revolutionize comb foundation ideas. It has a perfectly plain base, with side-walls formed. That intended for the brood-nest has wires in it to prevent sagging, and that for use in surplus honey is perfectly thin and transparent. Being "a thing of beauty" we hope it may be "a joy forever."

☞Some still presist in writing letters, leaving them unsealed and putting a one-cent stamp on them, thinking they have done a "smart thing." On all such, we have to pay 5 cents at this end of the route. All should remember, that anything written, other than on a postal card, must have a three-cent stamp on it, whether sealed or not.

Armstrong's Centennial Hive.

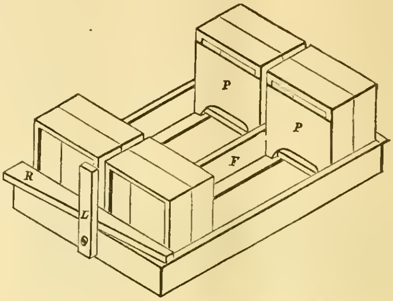
This hive has been duly installed into our museum since our last issue. A general idea of it may be gathered from the engraving herewith presented.—We much prefer the Langstroth hive, but as Mr. Armstrong has arranged his hive to use the newest improvements in the plan of getting comb honey, by means of Prize Boxes, tin separators, &c., bee-keepers can decide to suit themselves the question of the form, shape and *name* of the hive they prefer. It is the management and the manner of putting up the honey far more than the hive they use, that must demand attention. Almost any one of the numerous hives may be used to profit, if the management be upon scientific principles.



The Comb-Honey Rack Mr. Armstrong uses is correctly illustrated by the accompanying engraving. The middle honey-boxes are removed, in order to show the independent separators (P P) which, it will be observed, are so formed as to rest upon the base of the frame of the Rack (F) leaving an opening at the top and bottom for the bees to pass from one box to another.

He also uses eight honey-boxes at the sides of the brood chamber for storing surplus—four on each side. This plan is adopted by many with good results—coaxing the bees to commence working in the boxes early.

These things being now admitted to be a part of scientific and rational management of bees for profit, Mr. A. shows wisdom in adapting them to his hive.



ARMSTRONG'S COMB HONEY RACK.

Mr. Armstrong has issued a very neat little descriptive circular which is sent free to all who desire it.

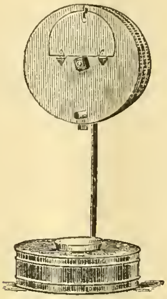
☞ During the season Fred. McCollunn of Council Grove, Kansas, had a colony which threw off four swarms. It was then given a thorough examination by Prof. Read who found seven young living queens. Five were caught and removed, and a few days later there was another swarm, all doing well.

☞ Dr. W. B. Rush was married to Miss Fannie A. Asher, on the 24th ult., at Granville, O., where he intends to reside in future. The JOURNAL extends its congratulations.

POSTAL ABSURDITIES. — There are some very queer things about our post-office regulations. Take the postal card, for instance, as pointed out by our contemporaries. If a man has a steady hand and writes closely, he may put several hundred words on a card and send it for a cent. If he pastes the least strip of printed matter on it, the postage is increased to 6 cents, though he may print on it the same matter, and by putting it in fine type get several thousand words on the card, and it will go for 1 cent; and he may paste the card all over with printed matter, then put it in an open envelope, and it will go for 1 cent. The card and envelope will go for less money than the card alone. When will these absurdities and inconsistencies be abolished, and everything go by weight at a uniform price?

Hill's Wax Extractor.

This consists of a boiler to hold the hot water, which may be placed on the stove, and from it a piece of gas-pipe runs up to the wax holder ; through this the steam is communicated to the wax, melting it and discharging it through a small tin pipe from the lower side, into a pan which may be placed on the boiler below, and thus be kept from congealing till enough for a good-sized cake is extracted. This extractor turns upon its axis, and having a smaller vessel inside made of perforated tin, the wax runs through it to the discharge pipe, not only at the bottom but on all sides. We have not seen it work, but should think it capable of performing the object of its manufacture, *i. e.* melting the wax and thus preparing it for market.



☞ "Can anyone select the best queen to breed from, by simply seeing?" is a very pertinent question. If he is wholly unacquainted with the relative merits of the colonies, we think it next to an impossibility. If he is familiar with them and their characteristics, it would be quite easy to do so. "O. M. A" says, in reference to this: "I have 80 colonies of Italians so near alike, that if any one will select the best queen to breed from, upon examing them, I will give him 2 of the colonies. If he fails, he shall present 2 Italian colonies to the Bee Journal. Here is a chance for the confident ones to test their skill. We shall see who will *dare* to take up the challenge.

The Langstroth Hive.

A correspondent inquires if there is a patent on the Langstroth hive, and whether any royalty can be collected of those using such ?

Certainly, *not!* That patent expired in 1873, and now there is no patent either on the hive or frame. All being free to make and use it at pleasure.

Sperry & Chandler have a patent on the "North Star Hive," including a manipulating side arrangement. This may be attached to any hive, and it is very applicable to the Langstroth hive. When so attached, the patent covers the "manipulating side," and not the hive in any sense.

In order to distinguish the Langstroth hive when so combined, from the ordinary Langstroth, it has been named the "New Langstroth Hive." Sperry & Chandler's claim being only on the "manipulating side," all are perfectly free to make, sell, use or vend the Langstroth hive or frame, in any shape, form or size to suit their notions. Though we hope all will study uniformity in size—the size of the standard Langstroth frame is 9⅛x17⅝ outside measure, with top-bar 19⅛ inches in length. The hive is 14x18½ inside, and 10 inches deep.

☞ At the Illinois State Fair, held at Freeport, Sept. 16-21, there was some honey exhibited, but nothing like the "Honey Show" that should have been made. Mr. Armstrong had his hive there on exhibition, and the "Excelsior" Extractor was represented. The Bingham smoker, Bingham & Hetherington uncapping-knife, and a few other small apiarian tools, completed the catalogue.

☞ Part II. of Novice's "A B C of Bee Culture" is on our desk. It covers the letters from D to H. A more appropriate name, we opine, would have been "Bee-Keepers' Encyclopedia," as that is really what it is. It will be handy as a reference book, when complete.

Lady Bee-Keepers.

On this shore of the Atlantic as well as in Europe, their "name is legion, for they are many." The best specimen of Honey in our Museum, is in an Isham box (very similar to the "prize box") and, is from the apiary of Miss Lucy Wilkins, of Farwell, Mich. This will no doubt be news to the excellent lady producer, for she is not aware of the fact that we have any of her crop of honey. 'Tis true, nevertheless, and it has been admired by hundreds (yea, thousands) of our visitors, both from the city and country. As this honey was purchased from a grocery store where Miss W. sold it, we have, at least this once, stolen a march on our excellent lady friend.

By the report of the Honey Show in London, England, which may be found on another page, it will be seen that the Baroness Burdett-Coutts, the most distinguished and philanthropic lady in the world, is also a producer and exhibitor of excellent honey! Her Ladyship is interesting herself to ameliorate the condition not only of humanity, but also of animals and insects. The London *World* remarks that "from some cause, possibly from ignorance, children are hideously cruel to animals, taking a great delight in torturing them, especially if they happen to be insects. The Baroness Burdett-Coutts hopes that by disseminating instruction concerning animals in infant schools, this tendency may be checked and interest take the place of cruel tyranny. Of course, she is fond of them individually. Her favorite brooch is a cameo of Fan, a dog of infinite good qualities, called some years since to her final rest; and her perpetual companions are Ben, a delightful bull-terrier with a beauty-spot on his back, and a perky little black-and-tan of perfect race. At luncheon time these interesting little beasts are naturally to the fore. On either side of their mistress is a plate of the daintiest Sevres *pate tendre*, from which these lucky dogs eat their cutlets or minced chicken."

Of course her Ladyship has jewels in abundance; so much so, that special repositories have been constructed to receive and preserve them, but the *World* says that none of the many "treasures of the past, however, is dearer to their owner than the most recent addition to her jewels—the grand whatever it is—it cannot be the cross—of the Medjidjie, conferred on her by the Sultan of Turkey, for her substantial help in establishing the compassionate fund."

The Best is Always Demanded.

Not only do rich consumers demand the best article, but *all* who have the means to buy and the sense to discriminate, demand the same thing. They will turn up their noses at the inferior article, and take the superior one every time.

Honey as well as flour, beef, cheese, apples or grain, will bring the highest price and readiest sale, when it is of the *first quality*, and put up in attractive style. Poor honey, as well as poor butter, is a drug in every market! And yet many still cling to their old notions and put up their honey in clumsy and unattractive packages, and then grumble because they cannot sell it at the highest price paid for a first-class and attractive article! Forgetting that it is the gilt-edged article that brings remunerative prices and a brisk demand.

The market now demands light honey in single-comb boxes, and another year, no other will find sale without the aid of a steam engine or some such power to push it off. The enterprising, the wide-awake bee-keeper will use prize boxes—leaving the 6, 12 and 24 lb. boxes for old fossils to use, and then to whine over them because they can't sell them at any price. It makes no difference where it comes from—the best and most attractive goods are always in demand.

Wonderful Exhibition.

One of the most interesting and wonderful exhibitions that can be made is working Bees. It attracts attention where all else fails. Visitors will brave the dangers to see the wonders! Let us have at least *one* colony of working bees at all our conventions. All visitors at the Crystal Palace, in London, have a small hand-bill like the following put into their hands:

A Perfect Kingdom in a Peck Measure.

"*NEVER KILL A BEE!*"

South Wing Corridor, opposite end from Aquarium, leading to London and Brighton Railway Station, Low Level.

FIRST OF THE

Thousand and One Attractions!

OF THE

CRYSTAL PALACE

IS

Marriott's Exhibition of Working Bees!

This wonderful, extraordinary and interesting sight has been visited by thousands, and by all pronounced to be the cheapest and most intellectual Exhibition of the Age.

THE QUEEN BEE,

Mother of the Whole Hive,

Ligurian, or Italian Alps Bees!

PURE HONEY FOR SALE,

DON'T FORGET MARRIOTT!

CRYSTAL PALACE BEE MASTER.

The first Exhibition in the Crystal Palace, opened in 1854.

Many try to Equal, None can Excel.

The result has been magical. Improved appliances are the result all over the Kingdom! Increased demand and consumption are the rule! The Bee stands in the foreground, with admiring multitudes following! Of course they are happy, for "industry and cheerfulness are sworn friends."

That Floating Apiary.

Many inquiries have been received as to the result of Mr. Perrine's experiment with a "floating apiary." The St. Louis *Globe-Democrat* has a long report from which we condense the following:

In the spring Mr. Perrine purchased two barges of ordinary length and a little stern-wheel steamer. Whatever of failure has attended the enterprise is due the inferior speed of the boat and a series of exasperating accidents to her machinery. The two barges were provided with shelving, and 400 hives of bees placed upon each. The hives were painted in contrasting colors in order that the little workers could return to the proper hive, the colors aiding each in distinguishing his home by comparative location.

The steamer made such slow progress, owing to breakage of machinery, that the barges were abandoned and the hives were put on the tug. Every few days the boat would stop, the hives were taken ashore and the bees released and when the vicinity was exhausted they would be reloaded and the run made for another garden spot.

The bees are all doing well, and are making honey with a facility gratifying to their owner. The trip will be made through to St. Paul, and then the bees will be taken south for the winter. Satisfied that he has struck a successful solution of the problem of how to insure the honey supply Mr. Perrine will complete his arrangements during the winter for an apiary on a still larger scale, and will leave New Orleans on April 1, 1879, with 2,000 colonies, towed by a boat of assured speed and power.

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☞ Notices of local Conventions are often left too late before being sent on for publication. Hereafter we propose to keep a standing table of *all* such in the JOURNAL, and will now request the Secretaries of such to send on for the next JOURNAL the time and place of next meeting. This will be very desirable for those wishing to attend, and to prevent clashing in time of meetings. We have been invited, pressingly, to attend four or five Conventions this month—all of them coming at the same time. This should be avoided, and can be, by having a reference table, as intimated.

Block for Frame Making.

Wilmington, N. C., Sept. 10, 1878.

Please give a cut of something to make frames on—something to assist in making and holding them together while nailing, &c.—with instructions for use.

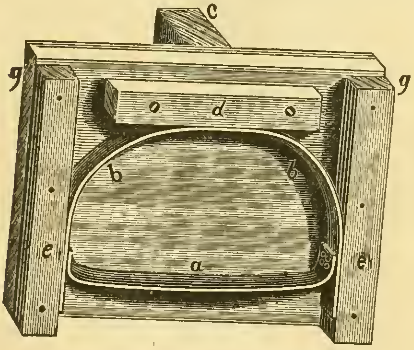
What does Prof. Cook use over his frames? Would it pay me to buy a foot power saw to make 100 to 150 hives?

R. C. TAYLOR.

Prof. Cook uses a quilt over his frames, made of unbleached factory, enclosing a thick layer of cotton-batting, hemmed about the edges and quilted.

We hardly believe it will pay to buy a saw for making 150 hives, but it would be a convenience. Your pine will make good hives.

Prof. Cook uses a block, like the one shown by the accompanying engraving, for frame making, and describes it thus, in his new Manual:



Prof. Cook's Block for Frame-Making.

Take a rectangular board eleven and a quarter by thirteen and a half inches. On both ends of one face of this, nail hard-wood pieces (*e*, *e*) one inch square and eleven inches long, so that one end (*g*, *g*) shall lack one-fourth inch of reaching the edge of the board. On the other face of the board, nail a strip (*c*) four inches wide and eleven and a quarter inches long, at right-angles to it, and in such position that the ends shall just reach to the edges of the board. Midway between the one inch square pieces, screw on another hard-wood strip (*d*) one inch square and four inches long, parallel with and three-fourths of an inch from the edge. To the bottom of this, screw a semi-oval piece of hoop-steel (*b*, *b*), which shall bend around and press against the square strips. The ends of this should not reach quite to the bottom of the board. Near the ends of this spring, fasten, by rivets, an inch strap (*a*), which shall be straight when riveted. These dimensions are for frames eleven inches square, inside measure, and must be varied for other sizes. To use this block, we crowd the end-bars of our frames between the steel springs (*b*, *b*) and the square strips (*e*, *e*); then lay on our top-bar and nail, after which we invert the block and nail the bottom-bar as we did the top-bar. Now press down on the strap (*a*), which will loosen the frame, when it may be removed all complete and true. Such a guage, not only insures perfect frames, but demands that every piece shall be cut with great accuracy. Some such arrangement should always be used in making the frames.

California Honey Product.

When it is considered there were no bees in California till after the American occupation, the progress since made in honey raising may be set down as something marvellous. There are few valley countries in which the business is not prosecuted to some extent, but San Diego takes the lead, and has acquired a reputation for her annual honey product which reaches this side of the Rocky Mountains. The San Diego *Union* says:

Notwithstanding the fears which have been expressed of a short honey crop, caused by the backwardness of the season and unusual cloudiness prevailing in May and June, Mr. Harbison informed us that he now expected to produce altogether from his various apiaries quite as large a crop as the largest he ever produced heretofore, which was over one hundred tons—the largest amount produced by any one man in the world in a single year.

☞ Friend O. Clute has removed from Keokuk to Iowa City, Iowa, and all his correspondents should hereafter address him there.

Foreign Notes.

Britains' Bee Show and Convention.

The British Bee-Keepers' Association held its fourth Bee and Honey Show, at the Royal Horticultural Gardens, South Kensington, London, in August, as spoken of in last month's BEE JOURNAL. It was a grand success and will do much good, by assisting to drive the old methods out of use, and in their place to introduce the latest phases of scientific bee-culture. The first President of this Association was Sir John Lubbock. Its present President being a Lady Bee-keeper, whose name is recognized the wide world over as a synonym for benevolence and philanthropy, the Baroness Burdett-Coutts. Honey from her beautiful residence, "Holly Lodge," was on exhibition and received the highest commendation.

The London *Times* remarks that the honorary secretary, Mr. Peel, announced in his address preceding the distribution of prizes, that the show had been successful and well attended, and that it was expected to be repeated next year in the same place. Mr. John Hunter, a member of the committee, delivered a lecture to the visitors, in which he explained the improved methods of bee keeping by the use of bar and frame hives, and the process of driving the bees and transferring them from one hive to another while the honey was "slung" out of the combs of the first. The combs can, after this operation, be restored to be filled again by the industrious insects, who under older methods of culture would have been stiffled with sulphur, while their successors would have had to waste precious days of summer in building up fresh honey-combs from the beginning.

Several experienced bee-masters gave examples of manipulation, guiding the bees like a flock of sheep into new hives, and rapidly selecting the queen, whom the rest always followed, from the drones and workers. Examples of combining the inmates of several hives into one, were shown, and it was stated that strange bees would always be received into a new hive if they brought honey with them. If, however, they could not thus pay their footing, they would be driven away like the drones which, after being fed for a brief season with the richest syrups by the workers, are expelled to perish of hunger and cold at the mouth of the hive.

The following were the principal prizes distributed: For the best hive for observation purposes, all combs visible on both sides, exhibited stocked with bees and their queen.

For the best movable comb hive, including covering and stand.

For the most economical, be stand cheapest, complete hive, on the movable comb principle, for cottagers' use, including cover and floor board.

For a hive for general use, on an entirely new and approved principle.

For the best and cheapest supers for general use in an apiary.

For the cheapest, neatest, and best supers for producing honey-comb in a saleable form.

For the best stock of Ligurian or other foreign bees.

For the best stock of pure English bees.

For the largest and best harvest of honey in the comb and from one stock of bees, under any system or combination of systems.

For the best super of honey, the super to be of wood, straw, or of wood in combination with glass or straw.

For the best glass super of honey.

For the best exhibition of honey in supers, or sections of supers, separable, and each not more than 3 lbs. in weight, the total weight not less than 12 lbs.

For the best single section in the comb, weighing not more than 3 lbs.

For the best exhibition of run or extracted honey, in glasses of 5 lbs. to 10 lbs. each.

For the largest and best exhibition of super honey in comb, the property of one cottager and gathered by his own bees.

For the best super of honey shown by a cottager.

For the best exhibition of run honey in glass jars, containing 5 lbs. to 10 lbs. each, shown by a cottager.

For the best mead or beer made from honey, with recipe attached.

For the best and largest collection of hives, bee-furniture, bee-gear, and bee-keeper's necessaries, no two articles alike.

For the best honey extractor.

For the finest sample of pure beeswax, not less than 3 lbs. in weight.

For any new invention calculated in the opinion of the judges to advance the culture of bees.

For the best microscopic-slides illustrating the natural history of the honey bee.

For the best and largest display of British bee flora.

For the best and cheapest honey jars with covers and fastenings complete, to contain $1\frac{3}{4}$ lbs. of extracted honey.

For the competitor who in the neatest, quickest, and most complete manner drove out the bees from the straw skep and captured the queen.

In addition to the principal distinctions, second, third, fourth, fifth, sixth and even seventh prizes, as well as high commendations, were awarded to exhibiters.

The most important part of the bee show was the exhibition of those methods of "driving" and manipulation by which the bees are induced to leave their hives. A competition for prizes in driving was on Tuesday held in a tent which had an inner inclosure of netting, so that the process could be observed without the spectator having to fear the stilettes of the enraged insects. The bees are first made drunk with sugar, or have their senses dulled a little with smoke, and are then drummed out of the hive into a straw skep, from which they are shaken into the new hive.

Many improved bar and frame hives were exhibited which makes the skill of the driver unnecessary, since the bees can be easily shaken out of them. In these a thin plate of wax is inserted to guide the bees in making their cells. They take advantage of the wall thus provided, and build against it. Their time is saved, and the combs are regularly built. A machine to produce these guiding walls, by rapidly passing wax under a roller, is exhibited this year. "Supers" are also shown. These are placed above the hives, and are removed as soon as they are filled with honey. Mr. John Hunter, the well-known apiarist shows American supers, to hold 1 lb. of honey. Extractors, in which the comb is placed and turned rapidly round till the honey is expelled by centrifugal force, are also shown.

Among the curiosities is a Portuguese hive of bark, exhibited by the Rev. F. T. Scott, and a quantity of honey produced on an upper floor in the strand, by Mr. Thurston, which were partly fed on syrup and partly foraged on the flowers of the embankment, or flew across the Thames to the learned shades of Lambeth. An interesting collection is that of the flowers from which bees chiefly gather their food—the spiked teasle, the meadow-sweet, the thyme which gave its flavor to the honey of Hymettus, the white nettle, the fragrant mignonette and lavender, with borage.

The exhibition was enlivened on the first day by a discussion, opened by the Rev. J. D. Glennie, on questions intresting to bee-masters. One of these was, "How far is the process which leads to swarming, initiated by, and carried out with the good will of the old queen?" The prevalent opinion was, that the queen did not leave the hive willingly; one apiarist, indeed, had seen her forcibly led out between two resolute advisers.

The London *Telegraph* says that the silver medal for "driving bees" was awarded to Mr. Martin, of West Wycombe, who succeeded in emptying his hive and caging the queen in five and three-quarter minutes, the bronze medal being taken by a cottager named Thorn, of Beldock, Herts, who drove his bees in less time, but did not so readily capture the queen.

The Baroness Burdett-Coutts, graced the competition with her presence, and expressed her admiration of the skill displayed.

The judges gave the silver medal for the best hive in the show to Mr. C. N. Abbott, of Southall, whose hive was so ingeniously arranged that it could be contracted or expanded as the need of the bees might require. The first prize for a hive for observation purposes, was secured by Mr. Brice Wilson, of Newbury, whose exhibit was a well made though somewhat expensive hive, both folding and revolving, following in some degree the principal devised by Huber.

Among the hives manufactured expressly for cottagers, were several, which were both serviceable and cheap. Of the dozen competitors, the palm was yielded to Mr. James Lee, of Bagshot. The collection of bee-keepers' necessaries included a honey extractor, which, however, is much more largely used in America than in England. The medal in this class was adjudged to Mr. Stephen Knight, of Newbury. An assortment of microscopic slides, illustrating the natural history of the hive bee, was displayed by Mr. John Hunter, the well known apiculturist, to whom a silver medal was awarded.

Live bees formed not the least interesting part of the show, and the first prize for foreigners was carried off by some Italians, owned by Mr. Baldwin, of the Alexandra palace; Messrs. Neighbour & Sons, securing the second with their Hungarians. Next to these was a nicely arranged stand of the flowers from which the bees draw the largest harvest. Cottagers came well to the front in the honey classes, two of the highest awards being secured by men in this sphere of life in the competition with their richer neighbors. Noticeable as a curiosity was a quantity of "chimney-pot" honey, the designation being applied on account of the honey having been taken from a hive in a room sixty feet from the ground in the Strand, the bees being assisted during the breeding season by artificial means.

Battle between Bees and Geese.

The "Bohemian" relates the following: In the village of M——, within a small rear garden, a number of weeks since, there lived quietly and peaceably together the inhabitants of a bee-hive and a family of geese; the latter consisting of a gander, 6 geese, and 28 young but full-grown ones of both sexes. The bees permitted this flock to cackle *ad libitum*, and they in return placed no obstacles in the way of the industrious tribe of bees.

But on a certain afternoon it seems that a pert young goose, with its bill, came too close to the hive, and perhaps had, in its wantonness, picked at it, which obtrusiveness, however, had been objected to by some returning worker, who in return gave it a sting. The flapping of the wings of the wounded goose gave the signal for a general fight In great swarms the bees came upon the defenseless flock, to whom the way of escape was shut off by the fastened gate.

The uproar at last attracted the attention of the people within doors, and not until after having received numerous stings was the man servant enabled to open the gate. Already

6 geese lay dead upon the ground, 2 died immediately after, a few were blind and remained so, and the rest were more or less wounded and did not recuperate until days after. The bees were so exasperated that hours after, neither human beings nor animals could venture into this garden or any of the neighboring yards.

Translated for the American Bee Journal.

German Bee-Keepers' Convention.

The Eighth General Convention of Alsace-Loraine Bee-Keepers' Society, in connection with an *exhibition and drawing of bees*, flowers, auxiliaries of bee-keeping, and products of the apiary, took place at Hagenau, August 18–22, 1878.

The following was the programme: At 10 a. m. the exhibition opened; at 4 p. m. there was a concert by the Pompier music band, in the court of the "Hopfenhalle." In the evening, illumination and pyrotechnical displays.

Aug. 19th.—Exhibition continued; general convention of the Alsace-Loraine Forest Administration. At 8 p. m., concert by the Jæger music-band, at the Europæischen Hof.

Aug. 20th.—Reception of foreign bee-keepers. At 8 p. m., meeting and entertainment at the Brasserie du Commerce.

Aug. 21st.—Main day of the society members. At 9 a. m., within the outer hall of the theatre: Opening of the Eighth General Convention by Herr Bastian, President of the Society. The Society matters were then considered in the following order: Nomination of judges; annual statement by Herr General Secretary Zwilling; financial report by the Second Treasurer, Herr Balzer; reinstalment of the Central Committee; nomination of treasury revisers; society statutes. Then followed a lecture on "How to organize a bee exhibition;" reports from the Parisian Apicultural Exhibition, by M. A. de Dietrich; the Bee-Keepers' Exhibition at the World's Fair in Paris, by J. Dennler, and a discussion of interesting topics. At 1 p. m., a banquet at the Kauf haus. Afterwards, drawing and proclamation of winners of prizes.—Evening, fireworks and torchlight procession.

Aug. 22d.—7 a. m., excursion to Philippsburg-Falkenstein, two hours' sojourn at Niederbronn, and a return to Hagenau, where the officers elect were duly installed, and a grand reception ensued.

Visitors were provided with quarters free, and transportation free to their homes by the railroads.

It has been enacted that bee-keeping is to be taught in the public schools of Alsace-Loraine.

There was an excellent display of flowers, and an exhibition of hives, honey and beeswax, as well as many apiarian implements.

A public sale of bees occurred at the close of the Convention. After the drawing of the prizes, a magnificent banquet was provided, and all went home having spent 5 days very profitably in real German enthusiastic style.

Conventions.

Kansas State Convention.

This association assembled in Lawrence, Kansas, on Wednesday, the 4th ult. The meeting was called to order by the president, N. Cameron. On motion, O. W. Carpenter was elected secretary.

The minutes of the last meeting were read and approved.

The president then delivered an address, for which a vote of thanks was tendered.

[As this address was not received until the 21st ult. we are compelled to give a synopsis or omit it entirely.—Ed.]

President Cameron explained that the association had not been called together for 4 years, because the excursion railroad fare made it next to impossible to get more than a *local* meeting. He deprecated the publication of honey yields as detrimental to bee-keepers, because, it induced many to embark in it only to be sadly disappointed.

He did not believe queens should be sent by mail with honey in the cage, for it was very likely to daub the mail matter. He favored candy-feed only for shipping. He also condemned in strong terms the nefarious practice of the adulteration of sweets; said that it was now almost universal and demanded the action of Congress to stop it. The health of the nation demanded some legislation to stop the flooding of the country with vile compounds called "syrups," as well as adulterated honey.

He remarked that these subjects were all important to bee-keepers, and demanded their attention rather than discussions about abstract questions, upon which no decision could be obtained.

The secretary then read communications to the association as follows: From I. P. Watt, Duck Creek, Ill., asking what part of Kansas is best adapted to bee-keeping, and what honey plants succeed best. There were none that could give much encouragement to go into bee-keeping as an exclusive business. The communication was turned over to the president to answer.

A communication from G. F. Merriam. Bernardino, San Diego county, Cal., giving a report of his apiaries for this season.

A communication from Charles Dadant, Hamilton, Illinois, on honey as a medicine, and adulteration.

One from Jas. Heddon, Dowagiac, Mich., entitled, "Stray Thoughts," touching various important topics in bee-keeping.

The subject of adulteration was discussed, and a committee appointed to prepare a bill to prevent and punish adulterators of food and to urge it upon the attention of the legislature next winter. Committee—N. Cameron, M. A. O'Neill and S. M. Allen.

There was on exhibition comb-foundation machines and white clover honey by F. J. Farr, Independence, Mo.; hives, honey, comb-foundation and section-boxes by P. Underwood, North Lawrence; section-box by J. Heddon; honey extractor, sample of honey-dew honey and bellows smoker by N. Cameron; and Cook's Manual by T. G. Newman & Son, Chicago, Ill.

After a vote of thanks to Judge Smith for the use of his room, the meeting adjourned.

O. W. Carpenter, *Sec.*

Lancaster Co. (Pa.) Convention.

This Association met at Lancaster, Pa., on Monday, Aug. 12, 1878.

The following members and visitors were present: Peter S. Reist, Litz (Pres't); J. G. Martin, Earl; Amos G. Wenger, Mastersonville; Tobias Seachrist, Manor; Samuel Erb, Warwick; G. S. Lintner, City; John Metzler, West Earl; Isaac Shirk, West Earl; J. F. Hershey, Mount Joy; J. M· Johnston, City; F. R. Diffenderfer, City; Elias Hershey, Paradise; John Huber, Pequea; Daniel Krider, West Lampeter: J. F. Schaffer, U. P.; B. F. Seldomridge.

The meeting was called to order by the President, who read the following address:

Gentlemen: It affords me great pleasure to meet the members of the Lancaster county, Pa., Bee-Keeper's Association again after a lapse of three months. Allow me, therefore, to greet all brother bee-keepers present, and bid all interested in bee-culture welcome to our city and to a participation in our discussions to-day.

As the time of our meeting is precious, I shall not trespass with any extended remarks. Suffice it to say that we meet here to discuss the habits and the management of bees, a subject that is becoming of great interest, and an industry which is the most remunerative, considering the amount of capital invested and cost of management, of any pursued in the country.

The number of pounds of beeswax now produced in the United States is about one million and a-half; this at 25 cents per pound would make $375,000.

The number of pounds of honey produced is now about 24,000,000; this at 15 cents per lb. would make the sum of $3,600,000, of which Pennsylvania alone produces about 1,500,000 lbs.

There are about 3,000 hives of bees in Lancaster county, 50,000 in the State and about 900,000 in the United States, from all of which is collected a surplus natural growth and substance which would be a loss to the human family were it not for the little bees. A gentleman in conversation with a friend on this subject once remarked, when asked if he was keeping many bees, "I own a lot, but the bees are keeping me," and such is the case in many instances.

Since so many volumes have been written and so many journals are published on bee-culture, I will ask to be excused from saying more than that there are a number of certain facts, well established, which we must understand and follow if we would be successful in bee-culture.

There are three kinds of bees, in every prosperous hive—the drones, the queen and the workers. The workers constitute the main body of the colony. These do all the labor, but live only about two months, and are the smallest. The drones are the male bees, fewer of which are raised in a hive, and are always destroyed after the honey season. They fecundate the queen, do no other work, and are clumsy and nearly as large as the queen herself, but are drones in every sense of the word.

The queen bee is the only perfect female in the hive. She is the mother of all the others. No colony can exist and prosper without the queen. There can never be two queen bees in one hive. She leaves the hive when about seven days old to meet the drones for the purpose of becoming fertilized, and never leaves the hive again, except with a swarm. The queen sometimes lives three years. She is capable of laying 100,000 eggs in one season.

There are four substances secreted in gathering by the bees, viz: pollen, or bee-bread, propolis, wax and honey.

A great deal depends on the management of bees and the handling thereof. There is a spring, summer and winter management, natural and artificial swarming, feeding, the kinds of hives or boxes, and the destruction of fruit. The subjects, together with the management necessary for every month in the year, will make good questions for our consideration to-day. The study of bee life and how to treat them so as to receive the most good from their labors, is a most interesting one and well deserves the attention of both farmer and scientists.

In the absence of the regular Secretary, F. R. Diffenderfer acted in that capacity.

REPORTS.

G. S. Lintner reported his bees as not having done as well as last year. He started with 8 colonies and they have increased nearly 100 per cent. The weather was not favorable and they have not made as much honey as they should have done.

J. F. Hershey said the spring was not favorable, some of his colonies were in a starving condition. He started with 62 colonies and has now 40 more. He has already taken away some 500 or 600 lbs. of honey and will get more. He gave his attention more to raising queens, and that prevented natural increase to a large extent.

John Huber said in the early summer some of his colonies did well, but since hay-making they have not done much. There has not been the increase that there should have been.

Elias Hershey started in the spring with 15 colonies and now has 27. His are Italian bees and have made about 25 lbs. of honey to the colony.

J. G. Martin said he had 5 colonies in the spring, sold 6, and now has 24 colonies. He has so far taken off 500 lbs. of honey, and still has a good deal more. He used a good quantity of foundation comb. The bees are doing well in his neighborhood, now, but did not do so well in the spring.

J. B. Eshleman, of Ephrata, reported that the increase of his colonies was small, he having made only 8 natural and 1 artificial swarm. His object is more to get honey than bees. He gave as a reason for the small increase that his colonies were very strong and in good condition in the early spring, and had made preparations for swarming, when the inclement weather came on, which prevented them from making much honey from the trees then blossoming; the great change in the atmosphere seemed to stop all further progress in the way of swarming. Had not this occurred he thinks he would have had more swarms in April alone than all his subsequent increase has amounted to. The yield of honey so far has been over 500 lbs., including what is still in the hives. The prospects for an additional surplus is good about Ephrata, the rains having improved the pasture.

Daniel Kreider began with 8 colonies and now has 14. He has taken away about 150 lbs. of honey, and his bees are still hard at work, with a fair promise of increasing their stores.

J. T. Sheaffer started with 9 colonies, and has now 20. He tries to raise bees more than honey. His bees have never done better. They are busily at work. The spring was unfavorable. He has Italian bees. His boxes are now full and they are storing away in the surplus boxes. He would have none but Italians. Some swarmed three times.

B. F. Seldomridge had 5 colonies to begin with and they swarmed well; all are now at work in the honey boxes, having filled the hives. Some are storing in the second extra box. All but one are Italians. His bees have never worked so well in July as at this season.

Amos G. Wenger started with 14 colonies in the spring. He has made about 350 lbs. of honey. His bees have done very well. In April they were doing well, but in May they nearly starved. From 3 Italian colonies he has now 8. In July they did very well.

The President remarked that bees seemed to require moisture as much as grass or corn. When the season is too dry they do not store up largely, but if the season is too wet it is also detrimental to the storage of large honey products. He had about 30 colonies. He has given them out on the shares. One man who got 15 hives, now has 32. They are gathering honey fast, and all seem to be doing well.

QUESTIONS FOR DISCUSSION.

"DO BEES SELECT A PLACE FOR THEIR HIVE PRIOR TO SWARMING?"

J. F. Hershey has seen a swarn leave the hive and go direct to a distant tree to remain. Often small working bodies of bees leave the main swarming body and seek a place to stop in. Many swarms are lost by bees going off. If the wings of the queen are clipped prior to swarming the bees do not escape.

J. G. Martin clips a wing of the queen and has lost no swarms; once he lost the queen by this operation, but saved the swarm. The clipped wing never grows out again.

G. S. Lintner divides his colonies and thus saves all trouble and loses no swarms. If a looking-glass is used when the bees are in the air and the reflected light is thrown upon them, they lose their course and come down at once. They are unable to withstand this test.

J. F. Shaeffer has tried all ways, and finds dust, stones, clubs and such articles about as good as anything. The looking-glass can't be used in cloudy weather and will hardly stop a swarm with a young queen. He does not know what to say about the selection of a place for a hive prior to swarming.

The President thought it unnatural for the bees not to select a place prior to issuing from the hive. He saw a swarm recently go direct to a hollow tree. Bees have been known to clean out a hollow tree several days prior to swarming as if making ready for that event. Bees have been known to be busy in and about a tree, then to leave it for a few days, and a swarm finally to take up its quarters there.

IS HONEY FOUND AS A NATURAL PRODUCT BY THE BEES, OR DO THEY MANUFACTURE IT?

J. F. Hershey.—Bees gather honey, they do not manufacture it. If bees gather from buckwheat it is buckwheat honey; if white clover it is white clover honey, etc. All the change that occurs in the honey is caused by the evaporation of the water; if sugar syrup is fed and stored in the comb, it is still the same.

J. G. Martin two years fed sugar syrup, and it did not seem to be any thing else when put into the combs.

J. F. Shaeffer agrees with Mr. Hershey. The honey will be just as the bees gather it, but evaporation will change it. The scent however remains the same, whether it be white clover or any other substance.

CAN A LOCALITY BE OVERSTOCKED BY BEES?

J. F. Hershey said he never had enough to test the question. Eighteen years ago, there were 10 colonies within a mile of his house; to-day there are 250, and they all gather as much honey as the early ones did. How it would be if a great many were congregated at one place he does not know, and was not prepared to say.

THE BEST REMEDY FOR BEE STINGS.

J. F. Shaeffer said spirits of ammonia are the best remedy. It prevents nearly all swelling and is a sure remedy to prevent pain.

Elias Hershey said an application of honey will prevent swelling; at first was intensely pained by the stings; now he no longer minds them.

J. F. Hershey corroborated the above;

stings have no longer much effect on him; they are no longer painful and cause little swelling. An onion will prevent swelling.

THE BEST WAY TO GET BEES OUT OF A HONEY BOX?

B. F. Seldomridge said, bore a gimlet hole in the box and blow smoke into it; all the bees will then go below.

J. F. Hershey said, if tobacco smoke is used it may infect the honey with its odor. He takes off the box and puts another on the top of it, when the bees generally ascent if the box is rapped on; when they have all gone into the new box he places it where the box filled with honey stood.

WHICH IS BEST, NATURAL SWARMING OR ARTIFICIAL DIVISION OF THE COLONY.

G. S. Lintner divided some colonies this spring and they did not do so well; but the weather was unfavorable. More honey is made by natural swarming, and more bees by the artificial method. He explained the process of making 3 colonies out of 2, that has proved successful with him.

J. F. Hershey said for such as look after bees, artificial swarming is best. By artificial swarming we get colonies when we want them—that is, in the honey season. By natural swarming we must wait until they swarm and sometimes they swarm too often, and too late.

Mr. Shaeffer said, to drive colonies one should understand the business thoroughly. About the 8th of June is the best time. He approved of artificial swarming. In natural swarming all the young bees come out, some of which are immature and wanting in strength and are frequently lost. A pint of bees now and then amounts to a good deal.

PREPARING COLONIES FOR WINTER.

J. F. Shaeffer advised all persons who were not thoroughly posted, to leave their bees on their summer stands. Once he lost 8 out of 11 colonies by trying to shelter them artificially, You must shelter them from behind by boards or straw, but leave the fronts exposed to the sun. There are always fine days when they can get the sun.

J. F. Hershey lost 50 colonies out of 102, by keeping them on the summer stands. Two years ago he built a sheltering house for his bees, which he can ventilate; it is dug 4 feet into and built 4 feet above the ground, or 8 feet high, with earth banked around the surface above ground. In this he wintered 70 colonies, some of them very weak, and got them all through safely. They are placed in 3 tiers, the strongest below and the weakest on top; he keeps the temperature at as nearly 45° as he can; he ventilates his house by tubes. When it gets too warm he sometimes opens the door over night, and thus reduces the temperature. He gives them a chance for a fly sometimes in early spring.

On motion, it was resolved to hold the next meeting on the second Monday of November.

There being no further business, the society adjourned.

PETER S. REIST, *Pres't.*

F. R. DIFFENDERFER, *Sec'y pro tem.*

Correspondence.

For the American Bee Journal.

Another Bee Enemy.

About one year ago I received a small bug from a gentleman in Maryland, together with the information that it was a serious enemy of the honey bee. It was stated that this bug would lie concealed among the flowers, and upon occasion would grasp a bee, and, holding it off at arm's length, would suck out its blood and life. More recently, I have heard of the same insect with the same habits, in Iowa, Missouri, Illinois, and more recently, through the editor of *Gleanings*, from Minnesota, and later still, from V. W. Keeney, Shirland, Ill. In one case it was stated that the bug had the power, which it was not slow to us, ofe stinging quite severely. This same insect has been observed by both Prof. W. J. Beal and myself, at this place, resting on flowers, in which it is often almost concealed, awaiting an opportunity to capture and defluidize its prospective victims.

WHAT IS IT?

This is a Hemipteron, or true bug, and belongs to the family *Phymatidæ Uhr.* It is the *Phymata Erosa*, Fabr., the specific name erosa referring to its jagged appearance. It is also called the "stinging bug," in reference to its habit of repelling intrusion by a painful thrust with its sharp, strong beak.

BIBLIOGRAPHY.

This insect is mentioned by the lamented Dr. B. D. Walsh (Am. Entomol., vol. 1, p. 141), who facetiously compares its intelligence with that of the highest bipeds, who are often ignorant of the difference between a bee and a beetle, nor could they safely grasp the former. Yet this humble bug does know the distinction, and holds the bee well off, so as safely to suck out its substance. On p. 25, vol. 2, of the same work, this insect is briefly described and its habits given. Dr. A. S. Packard speaks of this stinging bug, in the American Naturalist, vol. 1, p. 329, and also in his Guide to the Study of Insects, p. 552, where the insect is figured. Mr. Townend Glover, late of the Agricultural Department, in his beautiful work on the Hemiptera, p. 57, has described the habits of this bug, and has given three fig-

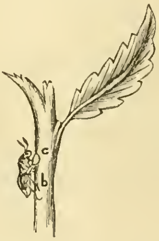


FIG. 1.—*Side View, natural size.*

ures of it, Plate III., Fig. 13. Prof. P. R. Uhler, our greatest American authority in this sub-order, in "Hemiptera West of the Mississippi," p. 58, speaks of the habits of the Phymata Erosa. In the current volume of the *Country Gentleman*, p. 551, the able entomological editor, Prof. J. A. Lintner, in response to a correspondent, gives a brief account of the habits, etc., of this same insect.

DESCRIPTION.

The "stinging bug" (Fig. 1) is somewhat jagged in appearance, about ⅜ of an inch long, and generally of a yellow color; though this latter seems quite variable. Frequently there is a distinct greenish hue. Beneath the abdomen, and on the back of the head, thorax and abdomen, it is more or less specked with brown; while across the dorsal aspect of the broadened abdomen is a marked stripe of brown (Fig. 2, d, d). Sometimes this stripe is almost wanting, sometimes a mere patch, while rarely the whole abdomen, is very slightly marked, and as often we find it almost wholly brown above and below. The legs (Fig. 2, b), beak and antennæ (Fig. 2, a) are greenish yellow. The beak (Fig. 3) has three joints (Fig. 3, a, b, c) and a sharp point (Fig. 3, d). This beak is not only the great weapon of offense, but also the organ through which the food is sucked. By the use of this, the insect has gained the soubriquet of stinging bug. This compact jointed beak is peculiar to all true bugs, and by observing it alone, we are able to distinguish all the very varied forms of this group. The antenna (Fig. 4) is four-jointed. The first joint (Fig. 4, a) is short, the second and third (Fig. 4, b and c) are long and slim, while the terminal one (Fig. 4, d) is much enlarged. This enlarged joint is one of the characteristics of the genus Phymata, as described by Latreille. But the most curious structural peculiarity of this insect, and the chief character of the genus Phymata, is the enlarged anterior legs (Figs. 5, 6 and 7). These, were they only to aid in locomotion, would seem like awkward, clumsy organs, but when we learn that they are used to grasp and hold their prey, then we can but appreciate and admire their modified form. The femur (Fig. 5, b) and the tarsus (Fig. 5, a) are toothed, while the latter is greatly enlarged. From the interior lower aspect of the femur (Fig. 6) is the small tibia, while on the lower edge of the tarsus (Fig. 6, d) is a cavity in which rests the single claw. The other four legs (Fig. 8) are much as usual.

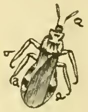


FIG. 2.—*Magnified twice.*

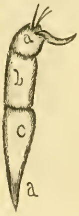


FIG. 3.—*Beak, much magnified.*

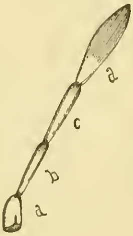


FIG. 4.—*Antenna, much magnified.*

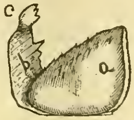


FIG. 5.—*Anterior Leg, magnified –exterior view.*

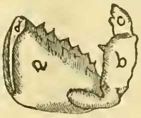


FIG. 6.—*Interior view.*

HABITS.

This insect, as already intimated, is very predaceous, lying in wait, often almost concealed, among flowers, ready to capture and destroy unwary plant-lice, caterpillars, beetles, butterflies, moths, and even bees and wasps. We have already noticed how well prepared it is for this work by its jaw-

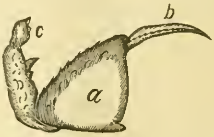


FIG. 7.—*Claw extended.*

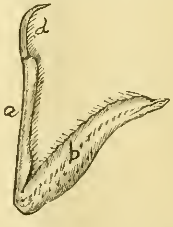


FIG. 8.—*Middle Leg—much magnified.*

like anterior legs, and its sharp, strong, sword-like beak.

Mr. Keeney says he caught the one he sent on golden rod. This plant, from its very color, tends to conceal the bug, and from the very character of the plant—being attractive as a honey-plant to bees—the slow bug is enabled to catch the spry and active honey-bee.

VERDICT.

As Prof. Uhler well says of the "stinging bug:" "It is very useful in destroying caterpillars and other vegetable-feeding insects, but is not very discriminating in its tastes, and would as soon seize the useful honey-bee as the pernicious saw-fly." And he might have added that it is equally indifferent to the virtues of our friendly insects like the parasitic and predaceous species.

We note, then, that this bug is not wholly evil, and as its destruction would be well-nigh impossible, for it is as widely scattered as are the flowers in which it lurks, we may well rest its case, at least until its destructiveness becomes more serious than at present.
A. J. COOK.

Agr'l College, Lansing, Sept. 14, '78.

* * *

For the American Bee Journal.

The Standard of Purity.

The question of a standard of purity for the Italians is one which interests me much, for my own ideas on that subject differ from those of most apiarists. I fear it will be very hard to decide conclusively what is the original type of the Italian in its state of perfect purity. But, let us see what is the evidence as we now find it: In all peculiar and distinct varieties, whether of animal, fowl or insect, there is some set typical mark of form, color or character; in quadrupeds it is generally seen in the form; in fowls, in color and form, giving preference to color; while in our bees (insects), there is scarcely difference enough in the form to make it a distinguishing mark; so we must fall back entirely on color and character for the typical mark. I wish Darwin, with his facilities for research, had given us his opinion on the subject, but I can find nowhere in his "Origin of Species," anything throwing light upon this matter. Going back to the ancient writers, Pliny, Virgil, Columella and others, we still find nothing sufficiently clear to be of much service.

There are two opinions at present among apiarists as to their origin—one, that they are a climatic variety, which has assumed this type by being reproduced for many centuries in certain districts. The other, that it is a cross upon the Egyptian bee. We can glean nothing on this point, either, from ancient writers. So let us look up the modern evidence as we find it.

Granting them to be a climatic variety, we notice that the bees of Milan and Lombardy, where no black bees are found, are a much lighter yellow than those of Piedmont, the Grisons and Lower Italy, where there are blacks. Also, that the bees from the former districts are more gentle and peaceable than those from the latter, where they seem to partake more of the disposition of the blacks. These things, we should think, would go to prove that the type of the pure Italian was yellow—and the yellower the purer as to color—and a mild, peaceable disposition in point of character, and where they are not found of this uniform pure yellow (without dark annulations, spots or tips), it shows a slight admixture of black blood, for surely, what is to prevent this? We find the two races in Italy in immediately adjoining districts, without natural barriers of any kind to prevent their union.

Any variety of animal or fowl, when perfectly pure, should reproduce in its offspring the typical marks by which it is distinguished, almost exactly; and, as a general rule, we will find that the yellower the queen, the more apt is she to do this, provided she be purely mated. Her daughters should be exact copies of herself. In regard to the workers, she should produce every one marked exactly alike—do not call them pure when some of them will show the third band plainly only when distended with honey, while others show at all times the three plain, broad, golden bands. No, there is something wrong even if none can be found which cannot be made to show the third bands. They must all be marked exactly alike. But some will say we have many dark queens that produce every worker alike, and perhaps duplicate themselves in their daughters. Very well, this is very easily explained, and very reasonably, too; for when there has been a cross of any two varieties, if this cross is then bred in upon itself, it will in time become a fixed type of its own. This accounts for our having light and dark-colored Italians, both queens and bees.

There is one thing, though, which puzzles me no little, that is, the statement of some of our most reliable men, that they have queens of a shining black which produce very light pretty workers. I have never seen or raised such. Will those who have, please let us know whether they were raised from the very light, or dark queens? The blackness of these queens I can only account for, by thinking that there must at some anterior time have been an admixture of black blood in the colony from which she came, and all naturalists recognize the law, that the progney of a cross will often show the pure markings of either side in certain individuals as well as the varying degree of resemblance to both found in others. And these peculiarities will often crop out many generations afterwards. How many of us have noticed the striped markings of the wild ass of the eastern deserts cropping out in the mule, his remote descendent, and a cross at that, showing for how long the traces of the blood will show itself in the descendents of any variety. On this account all crosses are liable to many variations of color.

If we take a queen of the light yellow variety and cross her with a hybrid drone very few, if any, of the bees will be entirely without the third band, only more irregularly marked and darker than if she had mated purely. But, if the queen be of the dark variety, many of the workers will show only two and some one band; at least, such has been my experience. This shows how a darker variety may originate ; and also, the inclination of the dark queen towards the black blood. Some apiarists gave this as a reason why most people wanted the very light-colored dollar queens; for if they had mated with a hybrid drone they would still show, what many take to be the mark of purity—i.e., three bands. I never call a queen pure Italian unless she produces bees, which show the third band *plainly* at all times, and queens that are regularly marked light yellow with no black on them; there are not many such I know, yet a few are found among the imported queens, and some where very careful breeding on light stock has been practiced. But I believe we have very few really pure Italians, with no black blood in them.

I know that these ideas will clash directly against those of some of our best apiarists, breeders and importers; for most of them hold that the dark queens are the best and their workers the best honey gatherers. Hence they say that they are just as pure Italians. When I say Italians I do not mean anything that comes from Italy, for there are black bees there, too, but I speak of the light yellow variety found there and no where else. I agree with them in the first point, but not in the latter. And now comes the main point; which do bee-keepers want, absolutly pure Italians or the most industrious honey gatherers? For those who want the former I would say, get the light yellow queens, without any black on them if possible; but to those who want the latter, and I do for one, I would say get the darker grades by all means. And now for my reasons for this advice, not that I have any interest in the matter, or have come with an "ax to grind," —for I *have no queens for sale*—I do not believe the pure Italians are as good as those which have a slight admixture of black blood, say about one-eighth. When it is as much as one-half, there is too much of the black, and they partake too much of their character.

In the summer of 1877 I bought some queens of H. Alley, which were the lighest I had ever seen at that time. I selected the largest, most active and prolific, and from her raised a good many queens. I had in the apiary about 80 hives, and only 10 of them pure Italians, the rest were from hybrid mothers; so the chances were about eight to one on these queens mating with hybrid drones. In the early spring the pure Italians were, with the exception of one colony, weak ; the hybrids were still worse off ; while the light queens which I had raised, for they were exact copies of the mothers, were strong and doing well ; one swarmed March 15, with 16 frames well filled with brood and honey, while the others were all doing nearly equally well, and they have continued ahead all the way through. I took 110 lbs. from one and nearly as much from the others, but none of the other classes of bees have yielded more than 40 to 50 lbs. These bees all show three bands, but none of them are regularly marked bright yellow, as the bees of the mother are, and the rings are more of a copper than golden color. The third band can be seen in all, but is narrow and dark in some and in others unusually broad and full.

I have now some of the dark varieties of queens which please me very much, but I do not call them Italians. The pure queens all did very well for a while, but ere the summer came they showed signs of failing and now none of them are first-class layers. I have one of the dark queens which reproduces herself almost exactly, but I do not think this an evidence that she is pure Italian; but pure of the type or grade of admixture to which she belongs. This is the very class of queens I want, and which I think will prove most profitable to the apiarist who is after honey and dollars, regardless of pretty looks.

And now for the second view of the case; supposing them to be a cross of the black and Eygptian bee, (which I have never seen or even a good description of it), there will be no difficulty on this stand-point, for the rules applying to the cross of Italians, and blacks, will of course fit here exactly. There are none *pure*, only some (the light ones I suppose) have taken after the Egyptian side of the house, and the darker ones *vice versa*. Cannot some of our scientific European apiarists who have the facilities, try the experiment of crossing the black and Egyptian bee, then breeding from the cross and see what they will obtain? There is room for a great deal of both thought and experiment in this matter—we want the latter especially.

I believe the Cyprian bee to have originated in one of these dark grades of Italians, and being shut up in its island home, by constant reproduction and certain climatic influences, to have assumed the present type.

These now are my Ideas gained from my observation, reading and experience. I only advance them as *ideas*. If I am wrong I hope some of our older and more experienced apiarists will take up the subject and show me where, for I am eager to learn as much more on the subject as possible. I shall continue to experiment and hope all will do the same and give us the result.

J. D. SLACK.

Plaquemine, La., Aug. 12, 1878.

For the American Bee Journal.

A City Besieged by Bees.

For six weeks past our bees have not collected honey enough to supply their daily wants. A little over a month ago, I extracted about all the honey I could get from several of my strongest colonies, and to-day there is scarcely a cell of capped honey in any of those hives.

A month of dry, scorching weather left our hillsides destitute of flowers, so that pilfering from our grocerymen and housewives seems to be their only means of support. The groceryman who leaves sweets exposed, or the housewife who attempts preserving fruit, is visited with "twenty thousand strong" in less time than it will take me to tell you about it, for no sooner do our busy little workers catch the scent upon the breezes, than away they go to the place of attraction.

The Bee Convention held here last spring has aroused such an interest in bee-keeping, that the business is entirely overdone.

There must be nearly five hundred colonies in the city of Burlington.

Well, the result is this, our citizens are justly complaining, our grocerymen and fruit dealers are terribly annoyed, our ladies are provoked and say some hard things about the bee-keepers, and the reporter of our evening paper has been admonished to do his duty, and now we are catching it through the columns of one of our dailies and your humble servant has been alluded to in a manner that comes very nearly being personal.

The great scarcity of flowers for the last few weeks is the cause of all this difficulty. If bees can get an "honest living" they will do it, but if they cannot, you know, they are given to thieving.

"What shall be done with my bees?" has been the question with me for the last few weeks. Realizing, as I do, that no one has a right to do anything that interferes with the rights of others, I have determined on shipping my bees out of the city as soon as possible. I have already made arrangements with a gentleman in the country to take them, and so in a few days I shall be deprived of the real pleasure I have hitherto enjoyed of spending my mornings and evenings in the apiary. I shall, however, continue an interest in forty or fifty colonies, but cannot give them the personal attention I so much desire.

The heavy rains we have had recently, have revived vegetation, and we are expecting our fall flowers to yield unusually large supplies. I. P. Wilson.

Burlington, Iowa, Aug. 25, 1878.

For the American Bee Journal.

Establishing the Purity of Italians.

Mr. Editor: I believe you are correct. We should have some established standard of purity for the Italian Bee. But, query: Who shall fix the standard? Not one, but all; not in person, but by voice in delegation.

All will agree that the worker-bees must show three distinct bands, but all, probably, will *not* agree as to their color! One wants them *orange;* another, *leather;* and a third, *chestnut;* while others have little or no choice in the shades, on condition that the bees are long and tapering below the thorax, and quiet in disposition, not leaving their combs for a given time after being removed from their hive, though carried in the open air.

Some, no doubt, will have strong prejudices in favor of the shades of queens, and the number of the crowns and spots on their bodies. But long experience shows that shades and spots are largely dependent upon the manner and season of breeding queens.

Beauty of color should never be made a test of purity in blood, yet it should be coveted when not at the expense of good qualities. A. Salisbury.

Camargo, Ill., August 24, 1878.

[Friend Salisbury is right. Let the National Society appoint a committee to take all the testimony, weigh well the points, and then render a decision. In other words, give us a Standard. Such a committee should be composed of the ablest and most thorough men we have, and the committee should have time given them in which to report through the bee papers. And when this is done, let that be accepted as the Standard, by which to judge all disputed cases of purity.—Ed.]

For the American Bee Journul.

Chaff from Sweet Home.

Such, in a great measure must bee-keepers regard the long article which was published in the August No. of the American Bee Journal, from the so-called Zell's Encyclopædia and the corrections (?) by D. D. Palmer.

The note Mr. Palmer received from the publishers, confessing their ignorance of the source of their information on the bee, and also their statement, that it was probably procured from standard works on the subject, which to practical bee men, are known to be unreliable, &c., shows very clearly of what unreliable material Zell's Encyclopædia is composed.

Because of this confession it logically follows, that the balance of the book is equally worthless, which I believe has long been well known by scholars.

We supposed, however, that D. D. Palmer was a practical bee man, and would write practical facts. Instead, however, in his so-called corrections, he has given to the world through the American Bee Journal and the aforesaid Encyclopædia, some of the worst "Chaff" ever written on the "bee." Take his No. 1. It is generally believed by practical bee men and asserted as a fact by anatomists, that when a bee loses its entire sting by its being dragged out of the abdomen, it must and invariably does die in a short time. If friend Palmer will examine the anatomical parts of a bee for himself, I think he will change his mind.

No. 2 is undoubtedly composed of both truth and error. The queen is the mother-bee of course, and she is also queen quite as much so as Victoria is the Queen of England. Both are rulers to a certain extent, and both are ruled. He says: "When swarms issue, she does not come forth of her own free will, but is pulled, crowded and dragged out." This may be so sometimes, but not always, as I have witnessed the exit of the queen, and I have never yet seen the least evidence of any crowding or pulling out. I also know that sometimes she comes out out among the first, and sometimes at the very last. I have seen her once this season walk out of the hive very deliberately after the swarm was high up in the air. The entrance was large and free, the alighting board long, and I had a free, unobstructed view of her. She was picked up and placed on a brush which was hoisted up into the air among the bees. They at once found her and commenced settling on and around her.

In No. 3 our Encyclopædist says: "The queen is never accompanied by a guard of 12 workers, neither more nor less, but a part of the time she is accompanied by workers, which caress and feed her *just in proportion to the number of eggs laid.*

How did you obtain the fact of this proportion Bro. D. D.?

But the climax of absurdities is reached in No. 6. He says: "Of those (eggs) laid, after mating, produce mostly workers depending upon whether laid in drone or worker cells." So then Bro. P., you have concluded hereafter, to have the queen lay one kind of eggs only and the character of the bee determined by the nest or place of deposit ?

Some fellow—genius would be the better word—has already proposed caging queen cells and hatching the queens under a setting hen. Now D. D., if you and this Texas genius would unite your forces, and you could induce your queens to lay eggs in a brahma hen's nest, you would at least solve the chicken problem. I have not said anything about our author's grammar, which is on a par with his statement of scientific facts in relation to bee culture.

But enough for the present. When Encyclopædias are made up of such stuff, is it surprising that they should be in disrepute ?

A. W. Foreman, M. D.

White Hall, Ill., Aug. 19, 1878.

For the American Bee Journal.

Italian vs. Black Bees.

Mr. Newman :—In Mr. F. Bangs' plea for Italian bees, he said too much against the blacks or natives. In 1877 I purchased 5 Italian queens, 4 of which I introduced successfully in my choicest colonies in the Centennial hive, to test their superiority before venturing to Italianize.

1st. Mr. Bangs states Italians are at work 2 hours earlier than blacks. He might as well say they work 4 hours later. It sounds about as reasonable.

2d. He says that blacks are always ready to attack man or beast, when the Italians do not pay any attention to them. I find no difference when passing through the apiary. Italians are somewhat more docile when handled with smoke, and find it very necessary to use smoke with both, unless you are fond of being stung.

3d. I would ask Mr. B., from which race he would prefer to extract honey ? I have extracted from 5 colonies of blacks and got no stings, but while extracting from a colony of Italians, I have been stung 20 times. The Italian adhere to the combs more closely than the blacks.

4th. As to robbing, in my experience, the Italian will rob and not be robbed.

5th. For honey gathering I consider the blacks, under accurate test, superior. My Italians and blacks are of equal condition, but some native colonies stored 3 lbs. more per day than some Italians.

I agree with Jos. M. Brooks, in Aug. No. page 273; the drones should be uniformly marked like the queen and workers.

I have some colonies of hybrids which I think hard to excel. If I ever purchase any more queens, I want prolific hybrids or natives.

I have taken 2,415 lbs. from 25 colonies, of which 1,400 lbs. are extracted honey of superior quality. Am selling in Philadelphia quite rapidly at 25 cents per lb.

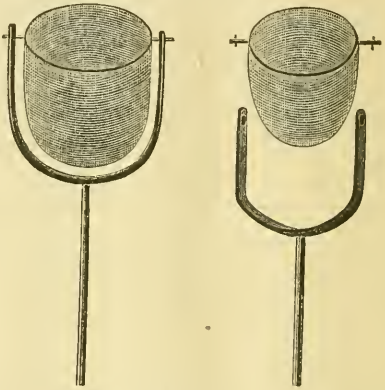
J. Talbert Williamson.

Delaware Co., Pa.

For the American Bee Journal.

Improved Swarm Catcher.

To make it, take a bar of iron 1 inch wide and ¼ inch thick ; drill a hole through each end ; take a basket of the size desired—1½ bushel is the best size ; fasten on each side a lug, so that the basket will hang level, then hang it in the crane. If hung right, it will always hang with bottom down, no matter in what position the crane is. For the handle, take a strip of pine 1½ inches thick, and 3 inches wide ; make the handle any length. I have taken swarms over 30 feet high. If made and hung right, it works well.



S. M. Oldham.

Reynoldsburg, Ohio.

For the American Bee Journal.

Will Queens Duplicate Themselves ?

ALLEY TO THE FRONT.

We had concluded not to say any more upon this subject until it was fully settled, but as friend Alley has come to the front we may expect to get this matter fully settled, as our friend breeds from no others but from those that will duplicate themselves every time. Hence he keeps the very kind to foot the bill. This being a fact, you may be sure of receiving the queen in due season, and she will be under the test ere this.

STANDARD OF PURITY.

Friend Alley said he was interested in reading the articles under the above heading. That queens that will produce such wonderful results are remarkable queens "indeed," that his experience covers a period of 17 years, but he never had a queen come up to the standard of purity as pictured by several correspondents, &c. At present, we can form no idea what our friend Alley alludes to, we have no recollections of seeing or hearing of anything that seemed mysterious except those described by our friend Alley, that duplicate themselves always in their queen progeny (?). He further remarks: "Friend Moon says he has no queens that will duplicate themselves." True, friend Alley. That statement was based upon our own experience of 16 years. During that time we have received queens from nearly every breeder in this country, even from friend Alley, and they were no more uniform in color than was the old lady's figure. Hence we inferred that no queens will duplicate themselves in their queen progeny every time. We should be sorry indeed to say that we had such queens, and upon a trial to have it found out they did not bear the recommendation given them! We certainly think they would be justified in saying, that we either were ignorent of what a queen was, or that we intended to deceive! While we do claim to breed as fine, and as pure queens as any one, we have none of those unvarying "princesses," neither do we think there is one in this country, judging from experience. The most uniform queen mother we ever knew, was one received from Dr. Larch, of Mo. One-half of her queens very strongly represented their mother queen. Her queens were a tan or light chestnut in color, and every good reliable and practical breeder, knows that these colors in queens are excellent; at least they are the colors that suit us. We have generally found their workers excellent.

TEST OF PURITY.

We cannot rely upon the color of a queen for a test of purity. Our only and safe dependence is upon the uniform markings of the workers. By this only can we judge of their purity. If they bear the 3 distinct yellow bands they are considered pure; they must be industrious, of good size, peaceable, hardy, prolific, &c. As to the color of the workers, we prefer a golden color. There are about three different shades of color in the worker bee—quite dark, medium and light yellow.

COLOR OF QUEENS.

When we penned that article as to queens duplicating themselves we were aware that we should get ourselves into hot water, and thought of a remark we once heard a nonsistent minister make. Said he, "I am going down to Flowerfield and will preach in the Methodist church, and it will be like taking a dog by the tail, and throwing him into a room with 40 cats—oh my, what a noise." So it has been with that article. Letters have reached me stating, they had queens that will duplicate themselves in their queen progeny every time, and friend Alley loomed up from old Massachusetts, and gave us to understand that he bred such queens by the hundreds, and that he breeds from no others.

IMPOSSIBLE.

Friend Alley says, like does not produce like in breeding bees, any more than in the breeding of any other animals. That all queens will not duplicate themselves every time is an established fact—the thing is "impossible." Now, if our friend is raising so many of these fine queens that he says "will" duplicate themselves every time, shall we, or shall we not understand him that the thing is impossible that he claims to be perfect in, viz: That his "queens will duplicate themselves every time." If this is a fact, all will then breed from such stock, but before saying much more upon this point, we will wait and see the result of the test.

POOR SEASON.

The present one has been one of the poorest ever known in this country for honey. The spring opened remarkably fine; bees swarmed early and often, but have made little surplus honey, and raised large amounts of brood. Reports from almost every portion of the state shows it to have been a poor season for honey.

Rome, Ga. A. F. Moon.

For the American Bee Journal.

Report from Doolittle's Apiary.

Spring opened very early, and our bees enjoyed the fine weather bringing in pollen quite freely as early as the 10th of March, which was a month earlier than usual. Brood-rearing went on rapidly, and by the 10th of May our hives were as well filled with brood and bees as they generally are the middle of June. At this time, apple trees opened with a profusion of blossoms, and our strongest colonies started queen-cells and made preparations for swarming. Our expections of a good honey yield from apple trees were great, for we were in need of honey just then, as our bees had consumed nearly all of their old stores, rearing such a large quantity of bees and brood. But, alas, human expectations are always liable to disappointment, and this proved no exception to the case. With the 12th of May came a cold storm, which lasted till the 15th, after which we had frost 6 nights in succession. The cold and frost spoiled all the flowers, and we were obliged to feed 1,500 lbs. to keep our bees from starving. White clover commenced to yield honey, sparingly, June 10th, and our bees were once more in the fields, so we could open hives, &c., without a million of robbers to beset us on every side. By this time, our bees were so reduced in numbers, that we were obliged to unite them down from 140 to 103, to get them strong enough to gather honey to the best advantage during the season. They made but little more than a living till basswood, which commenced to yield honey the 13th of July, and lasted till the night of the 22d, when our honey season came to an end for 1878. Our bees were in the best possible condition to take advantage of the harvest, and we think we never saw honey come in faster in our lives. Every available cell was full of honey, and the combs grew in the boxes as if by magic. The result of our season's work is as follows:

Box Honey	6,243
Extracted	1,070

This gives us an average of 71 lbs. to each old colony. Our best colony of bees gave us 161 lbs. Best extracted, 278 lbs. We have at present 194 colonies, but as some of them are rather light in stores, we shall double down to 150, as we always believe in making our bees self-supporting.

Although the honey season was poor, compared with last year, and the prospect is that prices for honey will rule low, still we have no reason to be discouraged. Our average yield per colony for the past 6 years has been 94 lbs. per year. As a person can attend to 100 colonies, this would give 9,400 lbs. a year, and even at the low price of 16 cents per lb., we would get $1,500 for a year's labor. Lest this statement should lead some to think that all they have to do is to buy 25 or 50 colonies to make a fortune, we will say that we work from early morn till late at night, averaging 15 hours work every day, the year round, Sundays excepted. We know of no business that a man can make profitable while simply folding his hands and sitting idly by. But a thorough knowledge of any business, and an untiring energy in the prosecution of it, will always result in success. G. M. DOOLITTLE.

Borodino, N. Y., Sept. 16, 1878.

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For the American Bee Journal.

Standard of Purity.

Our friend Mahin asks, in the September JOURNAL: "How shall we know when Italian bees are pure?" I will ask our friend, If you have a queen that will duplicate herself in her queen progeny, and produces worker-bees that show distinctly (without being filled with honey) the three colored bands, and whose drones are as even and uniformly marked as are the workers, with 3 broad, colored bands, all other good qualities being present—industry, size, gentleness, etc.—I ask, Are such queens pure Italian? If yes, why? If they are impure, why? You will greatly oblige me by answering in the November JOURNAL.

You say: "Some of those who have written on this subject have recommended selecting those stocks to breed from that have well-marked drones," and say you don't think it safe to follow that advice, because the most beautiful drones you ever saw "were the progeny of a queen whose mother was black, and whose father was an Italian," etc. I am *one* of the some that gave such advice, and again repeat it, that to improve our bees as to purity, we must pay more attention to the drones; but *not* to breed to such drones as you describe, whose *mother* was a hybrid, being reared from a black queen. No, indeed; I had reference to drones whose mother was reared from a pure Italian mother.

I asked the question in the August JOURNAL, Why Italian queens do not, and why they should not, produce all uniform three-banded drones, instead of the mixed progeny they generally produce? They being the progeny of one queen, it seems to me they should all be alike and uniform in their markings. I ask the question again, and hope to hear something about it in the next JOURNAL.

The only acknowledged test for purity is that if a queen produces 3-banded workers she is pure. Some breeders even advise filling the bees with honey to make them show the 3 bands. This is almost as bad as the man that would catch his bees, and almost pull the poor things in-two, to show you the third band was there. "Too thin for me."

Why not commence *further back* with the queen's *own* progeny, *the drones*, and see if they are all alike, and as uniform in their markings as is claimed the workers must be? Impregnation of the queen is claimed not to affect the drone progeny, which, if a fact, *would not* prevent her producing uniform drones, even should she mate with a black drone and produce hybrid workers. I do not believe the Dzierzon Theory, and never allow a mis-mated queen to rear drones in my apiary if I know it. To my disbelief I attribute my success in breeding and keeping my bees up to their present state of purity, by killing all such queens at once. I *know*, then, to a *certainty*, that I will have no further trouble by their rearing queens from their hybrid brood, as is sure to happen if the apiary is large, and worked for box honey and natural swarms. How often do we hear words like this from bee-keepers: "Yes, that queen mis-mated; she is such a fine-looking one, and her bees such good workers, that I *hate* to kill her; besides, you know, her *drones* will be pure anyway, so I have concluded to keep her?"

Now, such queens are just as apt to be superseded by their bees, or swarm unobserved by their keeper, and rear other queens from their own hybrid brood, as are his best queens. In case this should happen, and these hybrid queens mate with your best Italian drones, would it not be, sure enough, as friend Mahin says, "Even the most practiced eyes are liable to be deceived, judging by her workers."

My advice is, if you think the Italians are the best, and you want to keep them *strictly* pure, kill every mis-mated queen whenever you find one. You will then be on the safe side and have no risks to run. The above has been my practice from the first, and I find it the best, giving the least trouble in breeding, and keeping Italian bees in their purity. J. M. BROOKS.

Elizabethtown, Ind., Sept. 6, 1878.

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For the American Bee Journal.

Apiaries in Henry Co., Ohio.

FRIEND NEWMAN:—While attending the Soldiers Reunion, at Napoleon, Henry Co., Ohio, on the 3rd inst., I had the pleasure of meeting several bee-keeping friends who reside in the vicinity, among whom was Col. Mann and D. Kepler, of Napoleon, and Capt. W. F. Williams, of Liberty Center. Presuming a short account of my trip would not come amiss to your readers, I will endeavor to be as brief as possible.

Under the guidance of Mr. Kepler, we stopped at Col. Mann's residence, situated on the banks of the Maumee river. Although near the center of town, it is one of the most pleasant places that could be selected for an apiary. The apiary has a southern exposure, with a gentle slope towards the river, and consists of probably 50 colonies. Owing to the absence of the Colonel, I had no opportunity of learning of his success during the season.

Friend Kepler's apiary, numbering about 60 colonies, is located in the north-west part of town. Being anxious to see her majesty

—the queen—imported from Italy through Friends Newman, of the JOURNAL, we hastened to the apiary. Of course queens are nearly all alike; but it was not until then my good fortune to see a queen deposit eggs in an open frame, exposed to the bright sunlight, while being carried away from the hive at least 50 yards. The workers in the meantime were as quiet as could be wished for. After examining several other hives which were in fine condition, we adjourned to the house.

Next morning friend Kepler and myself started for Capt. Williams', whose farm is 4½ miles east of Napoleon and 2½ miles west of Liberty Center.

The bee-yard contained about 150 colonies only, 30 having been removed to a location 6 miles north-west, making in all 180. After much trouble, friend Williams has, during the last 5 years, succeeded in Italianizing all the bees within a radius of 3 miles. In several instances he furnished queens to persons indisposed to Italianize. He claims to have as pure a strain of Italian bees as can be found any where in the state; and from what I have seen during a 5 hours' stay I think he has. His imported queen is from Charles Dadant, of Hamilton, Ill., and her progeny does her credit—possessing the 3 spots on the backs spoken of in relation to the queen received from Rev. Salisbury in Sept. No. of JOURNAL. Friend Williams, in queen-rearing, endeavors to improve with each generation and has the following points in view in breeding, viz: First. Prolificness; Second. Industry; Third. Temper; Fourth. Color.

And judging from the heavy colonies in the yard, the constant stream of bees passing in and out, and the entire absence of "Bingham's addition to the apiary," so much in use among bee-keepers, I for one would be willing to sacrifice the clear buff color in a queen, could I have as evenly tempered bees as I saw at Capt. Williams'.

And now, Mr. Editor, as the mission of bee Journals is, as I understand, to improve our knowledge in bee-culture by an interchange of ideas, and as I have been a reader of some of the leading bee papers for a couple of years and saw nothing from the above source, would it not be a good idea to call friend W. out. as he is a subscriber to your JOURNAL. I don't anticipate he will refuse; and as he is a close observer and sound reasoner, as well as a successful bee-keeper, we may profit by his remarks on queen-rearing.

At dinner I had the pleasure of sampling various preserves, jellies and cake sweetened entirely with honey. The jelly, which was of crab-apple, was just as clear as if made of the best granulated sugar, proving the fact that honey will in a great measure take the place of sugar for the various household uses. After dinner an hour or two was spent in comparing notes and relating bee-keeping experiences, when the time of departure drew near and after a cordial hand shaking all round. and a brisk walk of 2½ miles I took the afternoon train for Toledo, enjoying a pleasant ride, and observing acres upon acres of boneset now in full bloom, and yellow patches of golden rod just budding out, which with the white clover and basswood in season makes north-western Ohio, second to none in point of honey production. A few miles outside the city the apiaries of B. O. Everett and L. P. Christiancy come in plain view, the newly painted hives, to the number of nearly 200, showing off to good advantage from the train. A few minutes more and our destination is reached, and our double holiday is one of the things that were, only to be remembered with pleasure.

JNO. Y. DETWILER.

Toledo, Ohio, Sept. 5, 1878.

For the American Bee Journal.

Chips from Sweet Home.

As each one of us cannot visit all the apiaries we might wish, I will give you a description of a few.

I had the pleasure of calling on J. H. Nellis, of Canajoharie, N. Y. He has certainly one of the most picturesque locations in the United States. He is about 2 miles from Canajoharie, on a high bluff of the Mohawk Valley. In sight of his apiary is the Mohawk river, a canal with a small village nestled in the side of the bluff, and over on the far side of the valley may be seen more than one train of cars per hour. He has a house apiary which holds about 50 hives. He told me that for queen rearing he would prefer the house to out-doors; but for surplus honey, he would take out-doors. They were putting their bees in the cellar while I was there. J. H. is very finely fixed for queen-rearing of which he makes a specialty. They have a shop, horse-power, saws, etc., for making bee hives, honey boxes, etc. Also, a printing press—in fact, he is well fixed for the business. Long and pleasantly we shall remember our short call with J. H. Nellis.

Sweet Home Apiary is located 12 miles south of Muscatine, and 8 miles north of New Boston, on a steppe of the bluff, being 4 miles from the Mississippi. These 4 miles being the Mississippi bottom, gives us willow bloom in spring, and from Aug. 20, till frost a supply of golden rod honey. Sweet Home Apiary (Sept. 5,) consists of 300 hives, which you may think is overstocking, but as long as we can make the average more per hive than smaller apiaries in as good location, we will not think we are overstocking. We use the double-portico Langstroth hive, and are using the prize box. Sweet Home consists of only 10 acres, being run for fruit of various kinds. The hives of the apiary run in rows north and south, east and west, being 6 feet from center to center, giving me room to run a wheel-barrow between the rows each way. Each hive has its slate hung on the front right hand corner, so that whenever I am operating a hive, I always open on this side, and here's my register at my left hand.

North of Sweet Home, within 1½ miles, are 2 apiaries of 200 hives. South of me 1 mile, is another apiary of 50 hives, and 4 miles further south is the apiary of L. H. Scudder consisting of between 200 and 300 Langstroth hives, situated in an apple orchard. Sandburrs, peppers and bee-stings make that a warm place. About 9 miles south of this we halt at Wirt's apiary, in Keithsburg; here we find about 100 hives, all Langstroth, surrounding his honey-house. His swarming was conducted in this wise; there being no trees near his apiary, he took some old gooseberry bushes and placed them on poles about 6 to 10 feet high; on these his bees always settled fully one-half settling on one pole. These poles were dropped in a hole in the ground and when the swarm had settled, he carried pole and bush to his hive.

Six miles east of this we find an apiary of 250 Langstroth hives, belonging to Dr. N. H. Derr.

About 8 miles from Keithsburg, and 4 miles north of Oquawka, we find the bee ranch of N. L. Jarvis, 150 hives, Banta & Kellogg.

The order and arrangement of Kellogg's apiary, shop and tools are fully commendable, everything in its place; tools bright and in condition for use. In fact, everything is stamped with neatness and precision. In this apiary there are about 100 hives.

To the north of this are 2 more apiaries belonging to Dickie & Hollingsworth, numbering perhaps 200 hives.

To sum up, we have near us 10 apiaries, numbering in all about 1,500 colonies. In the year of 1877, 79 members of Western Illinois and Eastern Iowa owned 3,980 colonies of bees, from which they got 144,000 ℔s. of honey. Can any other convention beat that? D. D. Palmer.

For the American Bee Journal.

Adulteration of Sweets.

> "Behold, I give unto you power to tread on serpents and scorpions, and over all the power of the enemy; and nothing shall by any means hurt you."
> —Luke 10 : 19.

Such is the answer that Mr. A. I. Root, under the date of Sept. 1st, made to the articles criticising his course in the American Bee Journal for September.

Still he deigned to descend from his pedestal to briefly answer my article on Adulteration of Sweets, in this language:

> "Because I have declined an article on the adulteration of honey, it has been intimated that I did it from selfish motives. I do not believe in 'writing up' or 'down' a thing, nor have I much faith in petitions to Congress, or legislation; but I do believe in letting people exercise their own good, common sense, and letting demand and supply regulate disputed questions. I have never bought or sold a pound of glucose in my life; but I have sold a great many tons of grape sugar for feeding bees, to incite brood-rearing. Grape sugar cannot be mixed with honey, either in the hive or out of it, by any way that I know of, on account of its propensity to solidify and separate. My profits are a quarter of a cent a pound.
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> "In regard to what shall or shall not be published in *Gleanings*, it seems to me you have chosen me to be the one to decide; I am always glad of suggestions, but inasmuch as we have, all the time, a great deal more *good* matter than can possibly be used, I do not see how I can always accommodate all of you."

In this answer, Mr. Root mistakes the facts. It is *not* because he declined an article on adulteration of honey, but because he declined at least three letters and the petition, and especially because he continues to extol glucose, knowing, as well as I do, that sugar is cheaper and more wholesome to feed bees.

In a letter Mr. Root had promised to help me in fighting adulteration. Why did he refuse his co-operation, after receiving the petition? Because I stated in this petition just what glucose was! I dare Mr. Root to point out another motive.

Mr. Root does not believe in "writing up" or "down" anything, and yet he was the one to decide what was fit to be published. To my mind, an editor should be like a judge, having the strict duty of putting before the people both sides of a disputed question, especially when it is an important one. A judge or an editor who acts differently, is not an impartial one; I will say more, is not an honest man, whatever be his claims to bigotry or Christianity.

Mr. Root has never sold a pound of liquid glucose. But he has prepared the way to sell it by tons, by intimating that basswood honey is better when mixed with glucose, and that no chemist would be able to detect the adulteration. It is true that he adds that such mixture would be dishonest. Imagine a father telling his sons that there are riper watermelons in the garden of our neighbor; you could help yourself easily without being detected; but don't go, for it would be dishonest? What would be the result? The boys would steal the watermelons! Mr. Root acts like that father, and anticipates a good sale of glucose to mix with the crop of honey! He cannot be responsible. Oh! no! Did he not tell his readers that this adulteration would be dishonest?

Mr. Root, who believes in miracles, does not believe in science, since he imagines that scientists cannot detect adulteration. He does not believe in legislation; but he believes in letting people exercise their common sense, leaving demand and supply to regulate disputed questions.

Every adulterator would endorse these views, and become rich before the question of adulterated honey could be fixed. In nearly all the civilized nations of the world—in England, France, Germany, etc.—there are public officers to examine all the articles of food offered to the people. Why? Because nobody would be able to detect all the frauds. For years, glucosed honey flooded our market, hindering the sale of the pure article. What good did, in this case, the system of letting the demand regulate the supply? None; for the adulterated article is every year more and more freely offered. Some of this adulterated article was exported to England. Immediately it was detected; the grocer of Glasgow, who had sold it, was fined, and the American dealers hastened to remove their spurious article, not only from England, but from France, and this unlawful business was nipped in the bud on the European continent. As legislation only could do that, let us have legislation.

"*Gleanings* has too many good things to use all." Yes; we find in *Gleanings* a great many letters praising the goods sent by the editor, together with some accounts of a boy who returned drunk, of another who swears, etc. But of what importance is the adulteration of honey to us bee-keepers, when compared with such interesting facts? Was it not enough for the readers of *Gleanings* to know that what was said against glucose, was but sensational reports ? Mr. Root proclaimed the qualities of glucose, and that was enough ! !

Is not selling solid glucose under the name of grape sugar, and refusing to publish the truth about it, a kind of swindle ? The so-called grape-sugar, such as is offered here, is a far poorer article than liquid glucose. In France, solid glucose is obtained by evaporating liquid glucose. Here it is obtained by putting in it a greater quantity of chalk, and the vendors of that compound, under the name of "grape sugar" (Mr. Root included), should be published as swindlers and humbugs in *Gleanings !*

I was one of the six who remonstrated against introducing religion in a newspaper. Like Mr. D. D. Palmer, I would be glad to have my letters published in *Gleanings*. As the editor of that paper insulted all the free-thinkers, by saying that there can be no honesty where there is no faith in the Bible, I will examine the motives of his conversion. I find them related in *Gleanings* for August, page 273 :

"Several years ago, a very intelligent bee-keeper paid me a visit of several days. At the time I was not a believer in the Bible, or at least I claimed that I was not, and he seemed to rejoice when he had discovered the fact. If I recollect aright, he made the remark that the greater part of our number were skeptics; that Mr. A did not believe in religion, and worked his bees on Sundays, also Mr. B, and C, and D, and E ; that Mr. F. was spiritualist, Mr. H something else, and so on. I remember a little feeling of pain at this, for lightly as I was in the habit of speaking of the Bible, I could not help feeling a slight shudder. Would he, while visiting other bee-keepers, say of me : Yes ; and Novice, too, does not believe in Bibles, and churches, and Sunday-schools ; but says it is an old piece of superstition, and it is high time that it was all done away with, and reckoned amongst the things of the past. It is true, my friends, I was fond of saying just those words….."

Mr. Root has always one eye to business. He shuddered at the idea of being known by bee-keepers as a free-thinker ! What would become of the metal corners, the Simplicity hive and *Gleanings ?* It was just to avoid so great a danger. To make a parade of a miraculous conversion was not enough ; was it not necessary to accuse of dishonesty all the unbelievers in the Bible ? This new departure having proved a good investment, our new saint boasts, every month, more and more of his religion and of his good deeds, and pockets the money beside !

I began my article with a quotation from the Bible ; I will terminate it with another :

"Therefore, when thou doest thine alms, do not sound a trumpet before thee, as do the hypocrites in the synagogues and in the streets, that they may have glory of men ! When thou prayest, thou shalt not be as the hypocrites are ; for they love to pray standing in the synagogues and in the corners of the streets, that they may be seen of men."
—Matt. 6 : 2, 5. CHAS. DADANT.

Hamilton, Ill.

P. S.—I have yet on hand a few hundred copies of the petition that I would be glad to send to send to parties, to have them signed. CH. D.

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☞ The Sorrento Saw for attaching to any sewing machine, advertised in another column, is a nice thing, and may be seen in our Museum.

For the American Bee Journal.

Why is It?

We have just returned from a trip to the St. Louis Exposition, one of the best, if not *the* best Exposition held in the West.

While there we looked around carefully for a display in the apiarian line, but not a thing to be seen in that way, nor a bee or bee hive, nor a single ounce of honey. We could but inquire of ourselves, why is it ? We speak of honey markets but what effort is or has been made to work up a Western market. None that we know of, save friend Muth, of Cincinnati.

Sorry that we cannot attend the National Convention this season, but other engagements prevent. W. J. ANDREWS.

Columbia, Tenn., Sept. 17, 1878.

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For the American Bee Journal.

A Curious Incident.

In Italianizing, I placed a small colony, with queen cell, on a strong colony that I wanted to change queens with, with wire cloth between, expecting after the young queen was fertilized to remove the old queen and let them all go together, but she was lost in going out to meet the drone, and so made a strong colony of the upper one, letting them raise a queen, and took them off. After the time had passed by for the young queen to hatch, I found that the young queen, on returning from her wedding trip, had gone into the lower hive, and being of the same scent, had passed unnoticed, met and killed the old one (which was clipped) and remained in that hive. May we not get a hint from this incident so as to make the changing of queens more easy ? You may set me down a strong disbeliever in the Dzierzon theory, in regard to drones being pure from a queen that has met an impure drone. S. S. BUTLER, M. D.

San Jose, Cal., Sept. 4, 1878.

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For the American Bee Journal.

Wire for Foundation, Extractor, &c.

When I wrote the article for the July number on "Wire for Foundation," I described bedding the wire in the foundation by placing in the sun and pressing the wire in with a gum roller. I have now got something better and cheaper. Make a wheel of wood 1¼ inches in diameter, ½ inch thick ; place in this oval tin cogs, ½ inch apart and ⅜ deep; set this wheel in a socket, and you are ready for work. Fasten the wires to foundation as described in the July number ; wet a board to fit the frame ; place the foundation on this with wires on the upper side ; then run the wheel over the wire, just hard enough to bed the wire into the foundation. The wire should be fine, so that it will cut into the foundation, and if it should be a little loose in the frames this wheel will kink it, so that it will work all right. Coarse wire will not bed well, and is a detriment to brood-rearing, as the queen will skip the cells it passes through ; but the fine wire rests on the bottom of the cells, and the queen appears not to notice it. Where the extractor is used, I think this wiring comb is a great invention. I have tested the extractor, by the side of comb honey, for five years, and I can make one-half more money with the extractor, even it I should sell for half the price! This year I ran 33 colonies with the extractor, that made me 6,000 lbs. I divided the 1st of August, and made 65 from 33! The rest I ran to comb; they averaged 78 lbs. of surplus, and were not increased; are not as strong now as my others. I can sell more extracted at 10c. than sections at 15c. The colonies I can sell at $8; this gives me, after paying for foundation, hives and sections, $24.25 per colony for the extracted, and $10 for the comb.

D. S. GIVEN.

Hooperston, Ill., Sept. 20, 1878.

For the American Bee Journal.

Does Pure Honey always Candy?

I have some beautiful extracted honey, taken from the combs the 10th of July, that at this date, Sept. 24th, shows no signs of graining. As regards color, quality and consistency, my patrons think it gilt-edged—at any rate, they pay me a gilt-edged price for it. Now, would it be safe to sell this honey, or simply expose it for sale, in case Dadant's national adulteration law was in operation? For does not Dadant claim that all *pure* honey candies, "sooner or later?" It may be, however, that this honey does not belong to the "sooner" classification. How is this, friend Dadant?

St. Charles, Ill. M. M. BALDRIDGE.

For the American Bee Journal.

Honey, &c. at the Tri-State Fair.

The following is a complete list of apiarian products and supplies, exhibited at the Tri-State Fair, held at Toledo, O., during the week ending Sept. 21st, 1878.

Messrs. Riegle & Boldosier, of Adelphia, Ross Co. O., exhibited samples of box honey, which took first premium at the state fair at Columbus, the week previous; also, the combination hive, bee feeder, smoker, single frame nuclei, &c.

Geo. Wilson & Son of Toledo, O., had on exhibition 10 different styles of Langstroth Hives, ranging in price from $1.00 to $2.00 each; also, sections, shipping crates, &c.

B. O. Everett exhibited fine samples of extracted clover and buckwheat honey. Also, honey extractors, Bingham's smoker, Muth's, Scofield's and Novice's honey knives.

H. J. Winters exhibited an observation hive, which attracted much attention from its superior workmanship; also, comb honey in sections.

Jno. Y. Detwiler of Toledo, O., exhibited 1 doz. each, of 1 and 2 lb. honey jars, which attracted much attention; also, a half barrel extracted clover honey, all of which was harvested in the heart of the city of Toledo.

It is to be regretted that the managers of the fair did not offer premiums outside of fruits, vegetables and the races, or I should no doubt have had the pleasure of reporting a larger exhibit. As it was, the honey exhibit seems to have been overlooked. For not until Friday evening, and then only upon personal application to the superintendent by the writer, was a committee appointed to examine the display, and enter it in the report of the association. I. O. U.

Toledo, O., Sept, 23, 1878.

For the American Bee Journal.

Bees Kill A Horse.

A rather singular freak among the bees took place here last Tuesday, resulting in the death of a fine horse. It appears the horse in drawing a load of lime, for use in a new building adjoining the yard where 11 colonies of bees stood, became much heated and was left standing outside the fence, about 12 feet from the bees, suddenly several were noticed about his head, and in less than half a minute, such a scene was never before witnessed; every colony seemed infuriated; all rushed at the horse until his head, neck and body could scarcely be seen. The poor animal could not be moved from the spot; some heroic men covered their faces, a woman led the party, by tying a veil over her hat, and with a broom and a bucket of water pitched at them, then the men followed. The head of the horse was covered several inches thick with them; they continued to throw on buckets of water and scrape off the bees by the quart. Finally they got the harness off, and dragged him away, but the poor animal died that night, in great agony.

W. B. BAKER, M, D.

Bristol, Pa., Sept. 2, 1878.

What shall the Decision be?

"Bees have not done well here this season; they wintered well. The season opened about a month earlier than usual. They did well through March and April, but May set in wet and cold, just as white clover was coming into bloom and continued so through white clover bloom; and the consequence is our honey crop is short, not over one-third of a crop. I have been reading with considerable interest the discussion now going on in the JOURNAL, in regard to the purity of Italian bees. It seems to me that those that have expressed themselves through the JOURNAL, differ widely as to what constitutes pure Italian bees. From my observation and experience I have arrived at the conclusion, that a queen that will uniformly produce three-banded workers and produce young queens that when fertilized by Italian drones, will produce three-banded workers without any exceptions, I think pure Itialian, and after they get through this discussion, I think that will be about the points that will be settled upon as fixing the standard of purity of Italian bees.

H. D. EDWARDS.

Delhi, Jersey Co. Ill., Sept. 10, 1878.

STATISTICAL TABLE — FALL OF 1878.

Name.	Location. County and State.	No. of Colonies Fall of 1877.	No. of Colonies Spring of 1878.	No. of Colonies Fall of 1878.	No. Wintered out-doors.	No. Wintered in-doors.	No. Wintered packed in chaff	Comb Honey.	Ext'd Honey.	Beeswax.
Aikin, R. C.	Page Co., Iowa	19	19	28	....	19	....	150	935	10
Allen, L.	Clark, Wis.	....	2	8	....	....	....	30	....	1
Allen, J. W.	Lenawee, Mich.	50	15	44	50	....	7	530	....	....
Andrews, C. L.	Point Coupee, La.	12	12	28	12	....	....	....	*200	10
Angell, J. L	Cortland, N. Y.	....	1	4	....	....	....	60	....	...
Aubert, J. L	Coles, Ill.	15	14	20	14	....	....	450	....	....
Anderson, J. L.	McHenry, Ill.	84	83	143	....	84	....	2000	....	....
Aylor, R. L.	Boone, Ky.	7	6	13	6	....	6	28	380	....
Baker, Ransom	LaSalle, Ill.	9	7	24	9	....	....	*300	....	8
Barnard, A. J.	LaPorte, Ind	60	60	98	60	....	....	1228	1215	9
Bartgis, David	Chautauqua, Kan.	8	8	20	8	....	8	....	825	....
Barnett. J. C	Champaign, O.	2	†3	8	2	....	2	115	....	....
Bauernfeind, J.	Winnebago, Wis.	43	40	82	....	43	....	....	2500	10
Barnard, R. C.	St. Joseph, Mich.	2	2	7	2	....	....	292	....	1
Becktell, R. S.	Berrien, Mich.	100	100	200	100	....	....	800	800	13
Bence & Son	Jefferson, Ky.	76	76	94	76	....	45	700	5800	....
Botsford, A. E.	Delaware, Iowa.	61	51	136	12	39	4	240	3000	25
Bonnewell, A. T.	Ozaukee, Wis.	108	107	150	....	108	....	....	6500	100
Bourgmeyer, John	Fond du Lac, Wis.	21	....	†16	....	21	...	....	200	15
Brown, G. W.	Cook, Ill.	12	11	27	12	....	....	500	340	5
Brothers, Mary	Putnam, Ind.	10	10	29	7	....	3	2175	....	....
Brewer, Joel	Wabash, Ind.	20	19	30	19	....	....	744	....	....
Brown, J. E.	Leavenworth, Kan.	7	7	14	7	....	....	40	100	....
Brumme, Carl	Wayne, Mich.	36	28	35	28	....	....	500	180	20
Bradley, H. M.	Bay, Mich.	27	19	77	....	19	....	400	1887	76
Brown, Zadock	Schoharie, N. Y.	33	32	41	33	....	22	2250	....	....
Butler, S. S.	Santa Clara, Cal.	20	20	40	20	....	....	....	2810	20
Bull, T. S.	Porter, Ind.	140	125	180	10	130	....	600	5800	80
Brundridge, T. W.	Baltimore, Md.	8	8	13	8	....	....	300	....	....
Bupp, J. H.	York, Pa.	27	26	32	27	....	3	237	262	10
Burt, C. S.	Cuyahoga, O.	27	27	50	2	25	2	1100	900	50
Camm, Wm.	Scott, Ill.	13	7	22	13	....	....	1000	....	....
Cooley, O. E.	Winnesheik, Iowa.	43	43	80	....	43	....	400	450	10
Crawford, C. C.	Kane, Ill.	50	25	69	....	50	...	....	1000	10
Christ, H.	Stark, O.	11	11	18	11	....	11	540	....	3
Cullen, F.	Onondaga, N. Y.	30	29	60	30	....	30	1420	225	15
Davis, Mark	DuPage, Ill	9	7	13	7	....	....	....	880	5
Davis, Nathan	Lyon, Kan.	8	6	23	8	....	....	40	....	....
Davis, W. J.	Warren, Pa.	154	153	230	....	154	....	3200	350	....
Day, Levi E.	Dakota, Minn.	51	51	§56	...	51	....	160	1750	6
Devol, N. B.	Clark, Ill.	16	16	42	16	....	16	200	180	4
Dick, Jno. W.	Benton, Mo.	72	64	92	64	....	....	410	2930	30
Dines, J. B.	St. Francois, Mo.	32	32	64	32	....	10	No acc't kept		
Dickinson, C, J	Chenango, N.Y.	56	52	81	7	49	7	2399	399	26
Dipman, Jno. F.	Sandusky, O.	44	42	65	40	....	4	420	2400	56
Drane, E.	Henry, Ky.	53	50	80	24	29	3	900	1900	45
Dunham, Mrs. F.	Brown, Wis.	25	24	42	...	25	....	300	500	10
Edwards, H. D.	Jersey, Ill.	15	15	27	15	....	15	315	125	3
Edwards, Edwin S	Onondaga, N. Y.	34	30	65	6	24	6	600	....	20
Eggleston & Co.	Macon, Mo.	2	2	18	2	....	....	200	1000	....
Eikenberry E.	Butler, Iowa.	46	44	68	....	46	....	600	1950	14
Everett, Wm. P.	Macomb, Mich.	79	23	52	....	79	....	....	4224	60
Fisher, A. J.	Columbiana, O.	45	40	90	45	....	....	1000	....	....
Field, Silas	Franklin, Mass.	10	8	14	5	3	....	40	....	....
Fletcher, W. H.	Benton, Minn.	37	37	53	....	37	....	825	225	....
Forsyth, R.	Lenawee, Mich.	64	†76	141	....	64	...	4500	720	12
France, Edwin	Grant, Wis.	100	97	160	97	....	97	1000	5120	80
Fritze, Wm.	St. Louis, Minn.	4	4	11	....	4	....	72	242	....
Franklin, B.	Schoharie, N. Y.	114	109	117	27	87	15	3500	800	40
Freeman, G. M.	Adams, O.	90	70	100	70	....	....	2500	1000	20
Funk, H. W.	McLean, Ill	9	9	23	9	....	9	500	200	....
Fullilove, J. H	Boone, Ky	68	68	§163	68	....	....	800	344	....
Garlick, Geo.	Peterboro, Ont.	90	83	104	90	....	....	225	915	10
Glazier, C. E.	Jefferson, N. Y.	22	§21	50	...	22	....	500	....	....
Godfrey, E. D.	Montgomery, Iowa	28	23	92	28	....	....	500	....	10
Grout, Wm. H. S.	Chautauqua, N. Y.	51	36	70	51	....	51	50	5100	100

NAME.	LOCATION. County and State.	No. of Colonies Fall of 1877.	No. of Colonies Spring of 1878.	No. of Colonies Fall of 1878.	No. Wintered out-doors.	No. Wintered in-doors.	No. Wintered packed in chaff	Comb Honey.	Ext'd Honey.	Beeswax.
Green, W. H.	Piscatequis, Me.	3	3	7	2	1	....	No acc't kept		
Gray, J. L	Lee, Ill	65	65	120	....	65	....	1999	2222	10
Gustin, A.	Platt, Mo.	4	4	11	4	....	4	....	1080	....
Hall, D. M.‡	Rock, Wis.	155	150	185	3	152	....	50	5000	100
Hamilton, Hugh	Coldwater, Mo	150	140	174	....	152	....	....	3999	25
Harding, W. D. C.	Clark, Wis.	....	11	8	....	....	....	52	545	22
Harper, James	Ingham, Mich.	117	§65	104	21	44	21	800	....	15
Hawley, Geo. M	Lancaster, Neb	108	102	177	1	107	....	599	1202	25
Harrison, R. W.	Rockingham, Va.	53	47	80	53	....	....	2000	....	....
Happe, F. W.	Schoharie, N. Y.	20	20	28	10	10	10	1200	....	....
Hartwell & Berkly	Lee, Ill.	25	25	60	25	....	....	350	200	....
Heckman, H. G.	St. Joseph, Mich.	7	7	18	7	....	....	....	800	6
Hershey, E.	Lancaster, Pa.	40	§38	26	40	....	....	450	....	15
Hixson, Wm.	Montgomery, Ind.	11	11	30	11	....	....	700	450	....
Hill, V. F.	Clark, Mo.	7	7	15	7	....	....	70	....	....
Horton, W. A.	Miami, Ind.	51	44	50	51	....	....	525	....	18
Hollman, J. M.	Fayette, Ky.	22	21	35	22	....	....	600	200	....
Howlett, W. H. H.	Boone, Ky.	33	33	78	33	....	33	2000	....	12
Hollman, N. H.	Barren, Ky.	19	19	35	19	....	....	125	650	10
Hubbard, C. S.	Ogle, Ill.	32	17	40	6	26	....	514	773	19
Hunt, C. H.	Winnebago, Ill.	10	9	24	...	10	....	100	....	....
Hunter, J. E.	Jones, Iowa.	68	68	110	1	67	1	2000	400	....
Hunt, Wm.	Linn, Iowa	220	216	250	...	220	....	2600	11400	100
Jewett, S. L.	Cooper, Mo.	28	28	38	28	....	....	500	....	....
Jones, Mrs. W. S.	Schoharie, N. Y.	13	13	23	....	13	....	425	....	....
Jones, Joseph	Center, Pa.	19	16	20	2	17	....	75	84	....
Jordan, Mrs. M. C.	Linn, Iowa	15	15	28	....	15	....	350	....	15
Kauffman, D.	Moultrie, Ill.	10	10	20	10	....	....	300	50	2
Keyes, E. H.	Jasper, Iowa	60	60	90	60	....	60	No acc't kept		
King, T. F.	Cumberland, Pa.	14	13	50	14	....	14	85	1350	20
Knowl, D. K.	Jay. Ind.	5	†7	18	5	....	....	100	40	....
Knowles, Jas.	Beaver, Pa.	30	30	44	30	....	30	900	....	1
Lamontague, I. B.	Quebec. Can.	4	6	10	....	10	....	150	....	5
Lane, D. P.	Rock, Wis.	121	97	146	....	97	....	3000	....	....
Lantz, L. Z.	Logan, O.	18	18	26	18	....	....	60	450	5
Larch, E. C. L.	Boone, Mo.	130	130	130	....	130	....	....	15000	....
Leonard, L. D.	Fond du Lac, Wis.	14	14	33	....	14	....	70	700	10
Link, Dock	Sumner, Tenn.	24	24	37	24	....	24	....	700	....
Link, Jacob	Sumner, Tenn	9	9	14	9	...	9	....	300	....
Lisk, H. B.	Shelby. Ind.	27	25	47	18	7	....	100	700	15
Lindsly. L., Jr.	Point Coupee, La.	196	171	300	....	....	....	....	10500	....
Liston, E.	Cedar, Mo.	85	84	87	84	....	....	No acc't kept		
Lloyd, J. E.	Cortland, N. Y.	73	64	106	73	....	....	3350	250	31
Lloyd, T. D.	Winnebago, Wis.	9	7	29	....	9	....	300	....	....
Loehr, M. E.	Kosciusko, Ind.	27	27	34	....	27	....	500	100	10
Long, Geo. W.	Wayne, Mich.	3	†4	11	3	....	3	255	70	5
Lytle, W. D. F.	Fayette, Ky.	8	7	13	7	....	....	50	200	3
Marsh, C. A.	Windsor, Vt.	24	24	30	....	24	....	1600	40	10
Marsh, S. K.	Ionia, Mich.	75	70	84	...	70	....	1936	2264	....
Martin, J. H.	Washington. N. Y.	107	100	115	3	104	3	1100	9000	25
Mason, M. E.	Ashtabula, O.	28	28	64	28	....	....	1200	150	10
Mead, J. C.	Lee, Ill.	23	§13	33	23	....	23	200	....	....
McIntyre, Jos.	Fannin, Texas.	30	26	35	26	....	....	400	150	....
McQueen. C.	Tuscarawas, O.	15	§19	36	15	....	15	500	975	20
Maclin, W. T.	Crockett, Tenn	12	8	18	8	....	....	150	....	....
McNitt, E.	Franklin, O.	39	35	52	39	....	39	1420	480	....
Milster, M. H.	Perry, Mo.	42	41	51	42	....	....	100	1700	....
Minchin, S.	Cayuga, N. Y.	13	11	28	13	....	....	375	30	15
Moore, J. E.	Genesee. N. Y.	82	62	116	82	....	82	4000	....	34
Monchee, Miss B.	Louisa, Iowa	4	4	9	....	4	....	122	114	5
Morrow & Cassell.	Rock Island, Ill.	15	11	31	15	....	....	No acc't kept		
Munaw, J. W.	DeWitt, Ill.	5	5	12	5	....	....	135	193	....
Murray, J. B	Harden. O.	60	59	125	59	....	....	1000	3000	10
Newman, J. C.	Wyoming, N. Y.	63	§55	103	63	....	20	7000	....	50
Oatman & Co., J.	Kane, Ill	185	§175	§260	....	185	....	7499	499	150
Oldham, S. M.	Franklin, O.	9	7	25	7	2	....	150	....	5
Owen, I. D.	Buchanan, Iowa.	10	10	25	....	10	....	317	....	....
Parent, J. I.	Saratoga, N. Y.	93	73	101	32	61	32	3411	1656	35

Name.	Location. County and State.	No. of Colonies Fall of 1877.	No. of Colonies Spring of 1878.	No. of Colonies Fall of 1878.	No. Wintered out-doors.	No. Wintered in-doors.	No. Wintered packed in chaff	Comb Honey.	Ext'd Honey.	Beeswax.
Palmer, D. D	Mercer, Ill	205	196	250	....	205	....	5300	3400	105
Peck, D. J	Susquehanna,‡Pa	54	53	71	....	54	....	2399	....	20
Pelham, J. E	Tioga, N. Y	28	26	56	4	24	4	1175	50	5
Pelon, Martin	Ottawa, Mich	38	35	45	38	....	....	1500	300	....
Perry, Fayette	Kane, Ill	19	18	42	....	19	....	65	1200	13
Pickup, E	Bureau, Ill	18	18	48	18	....	....	840	....	....
Pierson, N. H	Stark, Ill	8	8	26	5	....	....	200	....	....
Pierce, Warren	Portage, O	40	38	46	37	3	12	1999	....	10
Pike, Edwin	Grant, Wis	77	76	92	....	77	...	80	1480	6
Poppleton, O. O	Chickasaw, Iowa	57	57	123	....	....	57	200	3400	20
Pratt, B. F	Lee, Ill	6	10	20	6	....	6	100	828	10
Quick, S	Montgomery, Ind	8	8	24	8	....	....	....	335	....
Ralston, James	Benton, Iowa	13	13	20	....	13	....	250	350	7
Rofkar, H	Ottawa, O	18	17	33	18	....	18	200	600	....
Rogers, Clark	Allegany, N. Y	112	98	162	3	95	....	3100	200	....
Roop, H. F	Franklin, Mass	13	12	18	13	....	....	No acc't kept		
Sawyer, O. L	Kennebeck, Me	61	53	89	1	60	....	500	....	20
Scudder, L. H	Mercer, Ill	125	117	200	....	124	1	2500	100	15
Scheerer, Jno	Platt, Mo	9	9	27	9	....	9	....	2200	....
Scovell, H	Cherokee, Kan	113	113	175	113	....	....	....	1000	....
Sharp, M. T	Henderson, Ill	103	98	127	6	97	....	1200	925	60
Shaffer, N. M	Dubuque, Iowa	....	1	3	....	....	....	....	175	2
Simon, Chas	Noble, Ind	7	6	16	6	....	....	150	00	7
Smith, Jno. H	Crockett, Tenn	10	10	20	10	....	....	499	499	10
Simpkins, A. B	Schoharie, N. Y	40	39	50	40	....	....	2000	....	....
Smith, C. T	St. Clair, Ill	74	65	75	14	....	....	5	10	16
Snyder & Son	Albany, N. Y	120	110	150	20	100	....	2000	....	30
Snider, G. W. D	Spencer, Ky	40	40	63	40	....	....	1650	....	22
Soden, G. C	Ontario, N. Y	122	120	128	122	....	122	7250	50	62
Sprague, G. H	Steuben, N. Y	58	56	80	7	51	7	640	500	20
Stanley, O	Nelson, Ky	4	4	11	4	....	....	254	....	....
Sterritt, J. P	Mercer, Pa	57	52	70	57	....	57	1600	400	....
Stevenson, J. B	San Bernardino,Cal	175	138	*200	....	....	....	....	49280	325
Stephens, B. R	DeKalb, Ill	....	80	†102	....	....	....	999	7999	80
Stump, Wm	Hamilton, O	88	82	126	42	46	20	800	400	10
Sutcliff, Jas	Madison, N. Y	42	42	60	....	42	....	1500	750	26
Tabor, L. A	Hampden, Mass	8	8	11	2	6	2	200	....	....
Tarr, C. M	Monroe, Wis	3	3	12	....	3	....	150	....	....
Taylor, R. C	New Hanover, N.C.	....	2	8	....	....	....	300	....	3
Taylor, M. F	Hennepin, Minn	39	39	60	....	39	....	400	....	....
Tenny, Nelson	Monroe, N. Y	57	55	60	57	....	....	2000	....	40
Thorn, J. C	Wellington, Can	31	31	61	....	31	....	20	1400	12
Thompson, J. A	Livingston, N. Y	19	17	27	17	....	17	1501	77	....
Tibbetts, A. J	Dunn, Wis	6	6	22	2	4	6	300	....	....
Tracey, S. P	Gr. Traverse, Mich.	2	2	4	....	2	....	75	335	2
Triem, S. S	Blackhawk, Iowa	38	37	60	....	38	....	500	....	5
Truman, L	Hillsdale, Mich	40	37	77	....	40	....	....	2500	30
Van Horn, G. A	Lucas, O	8	§11	20	11	....	11	....	987	24
Wade, Walter	Tippecanoe, Ind	15	14	28	15	....	....	300	125	....
Wainwright, L. M.	Hamilton, Ind	3	3	11	....	3	....	....	....	....
Walser, H. T	Richland, Wis	6	6	16	6	....	....	50	....	....
Ward, W. S	Albany, N. Y	50	49	75	....	49	....	2840	160	....
Warren, H. H	Wayne, Mich	13	11	15	13	....	....	113	....	....
Washburn, F. H	Outagamie, Wis	28	26	50	28	....	28	2000	300	....
Weatherby, A	Meeker, Minn	9	6	9	2	7	....	132	....	....
Wellington, E	Tremont, Iowa	61	61	99	61	....	61	120	2000	30
Wellman, E. L	Warren, Pa	30	30	54	30	....	30	500	1000	....
Whitker, F. M	Putnam, Ill	43	42	69	42	....	....	500	....	....
Wilcox, F	Juneau, Wis	45	43	50	7	23	5	800	....	7
Willard, W. J	Union, Ill	12	12	27	12	....	....	250	156	4
Wilson, E. T	Dodge, Neb	....	8	22	....	....	....	No acc't kept		
Winfield, J	Ionia, O	....	29	46	....	....	....	1072	500	....
Worrall, J. R	Crockett, Tenn	50	45	52	50	....	....	500	2000	30
Worthington, W. S	Queens, N. Y	21	18	50	....	21	....	....	100	....

REFERENCES.—* Estimated to the end of the season ; † Purchased some ; § Sold some ; ‡ Raised and sold qneens.

Our Letter Box.

Mauston, Wis., Sept. 10, 1878.

"I lost 13 colonies early in the spring from robbers and mice. I lose a few every year from bad boys in the neighborhood. I use box hives and 10 lb. boxes. I intend to make the study of hives and boxes an important consideration this winter, and start anew next spring." F. WILCOX.

[As you are using 10 lb. boxes, we strongly advise you to adopt the prize box. No other package sells well in this market.—ED.]

Boscobel, Wis., Sept. 16, 1878.

"The past summer has been a failure here. It has been impossible for honey to secrete in good flowing quantities on account of excessive rains. Our bees have enough good honey, well capped for ordinary winter and spring use. Colonies are very strong, and thrifty, and we look forward for a better season in 1879." EDWIN PIKE.

Clark's Fork, Mo., Sept. 15, 1878.

"This season has been a rather poor one for honey. For a short time in June our bees did remarkable well, but when the drouth set in they quit work and have done but little work since, with no prospect for fall pasture, although I think the majority will have enough honey to winter on."

S. L. JEWETT.

Franklin, N. Y., Sept., 19, 1878.

"It has been the poorest season for honey in this section, I have ever known for 10 years. All my hives have plenty of honey for winter. I placed my boxes inside of hives, they seem to like to store there better than in top boxes. My hive contains 8 frames 16½x11¼. After they get nicely started, I place the boxes on top and put empty comb in center of brood-chamber or foundation. I have tried a few frames of foundation and like it very much for brood, but don't want any more for startes in boxes; nice white comb is better."

BENJ. FRANKLIN.

Riverton, Iowa, Sept. 13, 1878.

"The best part of my honey season has been the last 3 weeks. I have about 600 lbs. in the hive yet to extract and about 200 lbs. comb honey to take off. We have had frosts for the last 2 nights and I am afraid that it ends the honey season. I was trying to get 600 sections filled. I have 125 filled and the rest about ready to cap, but if the season is over, the capping I suppose is over also. My crop of honey last season, was about 4,000 lbs. I have had over 100 frames of honey melt down this summer. One hive of a capacity inside of 7,500 inches, with 24 frames, all melted in a heap, the first I ever had." E. WELLINGTON.

San Bernardino, Cal., Sept. 8, 1878.

"After last year's honey season we divided and got fertile queens, all doing well, but instead of letting well enough alone, we thought we would improve the stock; having received some fine Italians from the east; and killed off a good many laying hybrid queens, but the season being late, and drones scarce, we failed in replacing a good many of them, hence the reason of such a discrepancy in numbers between fall and spring. We prevent swarming all we can, but last spring several did come out, 12 of which we hived; which made up our number to 150 in all, and that is the number we worked this summer. This valley of ours is seldom noticed as a honey producing one, the neighboring counties San Diego and Los Angeles generally get all the credit. Now I wish to state, that this valley is equal to any of them, and in a year, such as last, far superior, for while those counties were losing colonies by the hundreds, none of our bee-keepers lost any by starvation, but instead, most of them were able to ship considerable surplus honey. From our 102 colonies we received 11,000 lbs. This year all have done remarkably well, few averaging less than 200 lbs. to the colony. As to quality it can't be beat. These are facts, which ought to give San Bernardino honey a reputation equal to any made in California. Those who have used foundation most have done the best, and all agree that it is essentially necessary for large honey yields."

JAMES B. STEVENSON.

Fish Creek, Wis., Sept. 13, 1878.

"I wintered my one colony of bees in my dwelling house, in a room up stairs. They came out in the spring all right, but they had no honey in the spring to keep them through the wet, cold, weather we had here, and I feared they would not do much, so I sent to you in June, for a nuclei colony, but before they arrived, I saw that my bees were queenless, and I put them together in the Langstroth hive, and they have increased to 2 good colonies. I have kept them from swarming by giving them plenty of room, to work in, over the breeding apartment, and they have done well, and are the nicest and largest bees that I ever saw. I am going to try wintering out doors this winter, and shall report in the spring how they did."

WM. DARLING.

Canandaigua, N. Y., Aug. 31, 1878.

"My 122 colonies I obtained from 52 colonies, in box hives, bought in the fall of 1877, although they were wintered with cut straw on top and straw on all sides except back and front. I transferred them in the spring of 1878; taking out the drone comb, was the cause of my getting so much wax. I used 20 lbs. worker foundation to replace the drone comb. Also, used about 15 lbs foundation as starters in sections. Have fed my bees nothing this year and will not be obliged to feed any. I had 40 lbs. or thereabouts of honey that I took from them, when transferring, I fed that back. I have made no estimate of that. Instead of chaff I used cut oat straw. I did not get honey from 20 of my colonies. The season here has been anything but first class. Bees lost 5 days in the best of white clover bloom, on account of its being cold and rainy. Also one day in basswood season. Have taken no honey from blacks since July 25th, nor do I think I will get any. My Italians have made about

25 lbs. each, since July 25. It has been 2 weeks since they stopped work. Think I have all the surplus honey I will get this season. Have no sections on at present."
G. C. Soden.

Mt. Auburn, Ind., Sept. 7, 1878.
"My bees commenced to swarm in April, and kept it up until the middle of August. Would have had a very good season for honey, if we had been prepared for it. Nearly all are now in good condition; plenty of bees and raising more, and gathering their winter stores. A sorghum mill is going to start within half a mile; I do not yet know what plan I shall adopt, to keep my bees away."
H. B. Lisk.

Genoa, DeKalb Co. Ill., Sept., 16, 1878.
"The honey season has been a very good one in this section, especially for those that have managed their bees with a proper knowledge of the science of bee-keeping. The notice in the Journal last winter, that I would sell 80 colonies of bees, was noticed by Mr. Stephens, of Toronto, Canada. A short correspondence and a bargain was made. In consequence of the long continued cold weather before June, one-half of the colonies were reduced to very few bees. But as the white clover began to blossom, they were soon in a condition for gathering honey. And with his knowledge of the science of bee-keeping and a perseverence in the business, Mr. Stephens has finished the season with the following result: 102 colonies, 8,000 lbs. of extracted honey, a large amount of comb-honey, not yet removed from the hives, 80 lbs. of wax, and plenty of honey now in hives for winter stores. The bees were moved 3 miles from their old stand, with the exception of 2, the product from those 2, were 9 new colonies, and 280 lbs. of extracted honey, and with not a particle of feed but what they gathered from the fields; have now enough for winter."
A. Stiles.

Warsaw, Canada, Sept. 10, 1878.
"The season here has been poor for honey. Continued frost in May and to 10th of June, left my hives without honey at that time, and several swarmed out to avoid starvation, but from that time up to date the season has been very good. Colonies all in good order for winter, having a large amount of brood in them now. I shall extract about 300 lbs. more yet from them and still leave plenty for winter stores."
G. Garlick.

South Pendleton, Ohio, Sept. 15, 1878.
"The weather of the month of June ruined our prospect for this year, which up to that time was never better. I calculated on 4,000 ℔s. of surplus honey, but got only 1,200 lbs. I had only 5 natural swarms. The hive I use is a non-swarmer; its capacity at one time is 132 lbs., but I never allow a box or frame to remain on after it is capped over. After honey season is over I get my increase by taking one frame from each hive, putting 6 together and giving them a young queen of my own raising; having 15 nuclei. My increase has not been all from my own; having bought 3 and traded hives and honey for some, and had some on shares. Bees in this locality go into winter quarters strong in young bees and plenty of honey. I am now preparing my bees for winter in chaff, with carpet over bees and no honey board. My hive holds 8 frames 11x17⅝."
W. Stump.

Neosho Rapids, Kan. Sept. 9, 1878.
"My bees have increased well, this season, by natural swarming. They made no surplus honey until about two weeks ago, I took 40 lbs. from 2 hives last Saturday. I have 1 coloney which increased to 7 since last spring, by natural swarming."
Nathan Davis.

Glen Rock, Pa., Sept. 7, 1878.
"There was no difference last spring in those colonies wintered in chaff or without, owing probably to our mild winter. I have good prospects for 300 or 400 lbs. of comb honey more this season; buckwheat harvest is good thus far."
J. H. Bupp.

Hudson, Mich., Sept. 16, 1878.
"My loss was heavy last spring. 1 wintered under a shed facing the east. All went into winter quarters strong and full of honey, but they dwindled all winter. They were in American hives and had a fair amount of ventilation and mats on top. I have a repository but I deemed it too warm last season to winter in. I think I will winter in chaff next season, as only 1 colony died that was treated that way last winter."
J. W. Allen.

Central City, Iowa. Sept. 16, 1878.
"Can Italian bees gather honey from red clover?"
Mrs. M. C. Jordan.

[Only a little.—Ed.]

Washington Co., Wis., Sept. 8, 1878.
"This is my first year's experience with bees. I have increased from 1 to 7; have taken 100 lbs. of surplus and have on the hives 50 lbs. more of surplus honey—about one half each of comb and extracted, leaving at least 30 lbs. for each colony to winter on. 'Foundation' and 'dividing colonies' did it!"
Geo. W. Jones.

[Seven colonies from 1 is "good enough!" but with 150 lbs. of surplus honey, it is astonishing. True, the use of "comb foundation" and judiciously "dividing colonies" will do wonders. If you have young bees enough, and give them 30 lbs. of good capped honey to winter on, they should winter well; and if so, you have nothing to be ashamed of from your first year's experience with bee-keeping.—Ed.]

Garden Plain, Ill., Sept. 3, 1878.
"Bees are at work again, but the season will be a short one, being curtailed both at the beginning and end. They worked on clover about 4 weeks. On account of the drouth, the fall crop did not begin till about Aug. 20, and it will be a very light yield."
R. R. Murphy.

Cedar Vale, Kan., Sept. 15, 1878.

"Our fall honey rush is just commencing. Aster and golden rod is in abundance, we have two kinds of astor here, both excellent honey yielders. My bees have at this time an average of 45 or 50 lbs. of capped honey, and my reason for leaving that amount is that I am as yet unacquainted with the country, and know not what the fall resoures for late honey will be, but indications at this time are good. I think there will be considerable surplus yet. I find ready sale for extracted honey at 20 cents per lb. Could sell all my bees at $10. per colony, but intend keeping them, as they pay me well. My honey is a No. 1 article, very clear and white, and weighs 12 or 12½ lbs. per gallon."

D. Bartgis.

New Richmond, Ind., Sept, 16, 1878.

"I wintered about 100 colonies without loss, on summer stands packed with chaff. Had 10 snowed under 4 feet deep for a month, 2 years ago, and all was well. I think we should breed for the characteristics we desire in a working colony, rather than "fancy" or appearance. I want good box-workers, no matter what the size or appearance of the queen. I have 1 colony that has not swarmed for 3 or 4 years, and is always in good condition and gives good surplus.

J. O. Shearman.

Hamilton, O., Sept. 21, 1878.

Friend Newman.—I will send you a condensed report of the meeting of the South-western Ohio Bee Keepers' Association, held in Lebanon, O., Sept. 14, 1878.

Drones can be kept for late queen-rearing, by taking a queen from a colony that has plenty of them, and keeping her in a nucleus till late in the season, then she can be returned. Queens will shake about in the cell when they are dead, but if they are alive they wil not. Nine lbs. of honey will last a moderate sized colony from Nov. 1st until April 1st, but a good colony requires 25 lbs. to last through winter and spring. "Root" and "King" smokers were on exhibition, besides a "Savage" queen cage, and "Mitchell" bee hive. As Mitchell is trying to get a hold in our neighborhood, I would take it as a favor, if any one that has had dealings with him that were not satisfactory, would send me a short account of it, on a postal card, to be used at our next meeting. Has he raised any queens at Sandusky this last summer, as per his pamphlet? Next meeting to be held in the same place on the second Friday in February, 1879.

W. S. Boyd, *Sec.*

Peoria, Ill., Sept. 22, 1878.

"Noticing that a colony of bees were not as populous as they ought to be, I examined them. Lo! and behold, the brood-nest wasn't there. It was entirely cut out in some frames, leaving openings as large as my hand; in others it was cut down to the base of the cells, and looked as if it had been newly varnished. There was not a cell of brood in the hive; and not one for the queen to lay in, for the rest of the frames were all capped honey. It had a fair amount of bees, a queen and a large amount of capped honey. There was no moths, and the hive was clean, as though they had just finished house cleaning. Why did they cut out brood-nest?"

Mrs. L. Harrison.

[We cannot explain this freak without more particulars. Was the comb old? This sometimes causes them to tear it down. Has any of our readers had similar experience? If so, we would like to hear from.—Ed.]

Greene, Iowa, Sept. 9. 1878.

"My bees have done well since the first of August. I got all my surplus, 2,500 lbs., in four weeks, from buckwheat and fireweed. I have one hive on the scales; the most gathered in one day was 6¼ lbs., and the least 2½ lbs."

E. Eikenberry.

Byron, N. Y., Sept. 9, 1378.

Hive No. 79 has so far given me one hundred and three boxes of white honey, weighing two hundred and eight pounds."

J. E. Moore.

[Good enough. That must be your "banner colony," is it not, friend Moore?—Ed.]

Hope, O., Sept. 7, 1878.

"Instead of an extraordinary honey yield we had almost a failure. Comb foundation has helped me out of many difficulties already. I never saw bees stronger or working more vigorously than now."

E. McNitt.

Vinton, Iowa, Sept. 9, 1878.

"I began the season with twelve colonies, and had nine swarms. One of the swarms left the hive after the queen began to lay, and united with another swarm. White clover yielded abundantly. From then till the end of August they did nothing. Now they are at work on fall flowers, which are abundant here. I have ready sale for all my honey at fifteen and twenty cts. per pound."

Jas. Ralston.

Lincolnville, Ind., Sept. 14th, '78.

"I think I have done pretty well this season. I robbed my bees a little too much last season; half of them would have starved if I had not fed them. I examined them early and found one colony starved to death. I immediately bought $5 worth of sugar and fed it all to them. This lasted till white clover began to blossom, but just before the clover began to bloom they pitched in and robbed out one colony, leaving but eighteen colonies. I have sold all my honey at twenty cents per lb. It was pronounced the nicest comb honey in the market."

Joel Brewer.

Nodaway Mills, Ia., Sept. 9, 1878.

"Bees in this part of the country are storing from buckwheat, smart-weed, spanish needle and golden rod; but the past few days has been so cold, that they could not do much. The spanish needle honey I like very much; it is clearer, but a little thiner than buckwheat, but very pleasant to the taste, after standing for awhile. Gathering has been good all summer until the last of August, except about 2 weeks before and during basswood bloom. The honey stored then, principally mustard, was clear but very thin. The first part of the season was very wet." R. C. AIKIN.

Grant, Ky., Sept. 23, 1878.

"Bees are doing well now on smart-weed and other wild bloom; the golden rod is not quite in bloom, but will be in about a week from now." R. L. AYLOR.

Hubbard, O., Sept. 17, '78.

"The season here has been good. I sell comb honey at 25 cents per lb; extracted, 6 lbs. for $1.00. Wholesale, 15@20 cents. I could not get so much were it not in small sections." J. WINFIELD.

Macon, Mo., Sept. 8, '78.

"Wintered 18 colonies; 2 starved; sold 8 in the spring, at $6. each, leaving 8. Have Italianized and built up to 51 strong colonies of 8 to 12 frames each. Have taken 1200 lbs. of honey, and expect several hundred pounds more." C. EGGLESTON.

Walton, Ky., Sept. 9 '78.

"My bees did well, and all in good condition for winter. I use the Langstroth and Mitchell hives—the former I like best for comb honey production, the latter for wintering." JOHN. H. FULLILOVE.

Adams Center, N. Y., Sept. 9, 1878.

"Early frosts and wet weather following, ruined the spring honey crop. Then they swarmed too much, and the extreme hot weather, caused many of the combs to melt down. Another year I shall try to prevent swarming and work for box honey. My bees are in good shape for winter. May have to feed a little." C. E. GLAZIER.

Elliston, O., Sept. 9, 1878.

"My bees are storing honey now from boneset and golden rod. I will get two or three barrels more of honey. I lost two colonies in the spring by being queenless; and two by moving them into the country. Box-honey is almost a failure this season, on account of too much rain."
JOHN F. DIPMAN.

Haskinsville, N. Y., Sept. 9, '78.

"This has been a very poor season for honey. With more bees and better advantages for taking honey than last year, I have taken only about one-third the amount of honey I then had. It has been a fruitful season and plenty of bloom, but it was too wet for honey." GEO. H. SPRAGUE.

Ada, O., Aug. 28, 1878.

"I have gradually increased from ten log gums, bought in the spring of 1875, to one hundred and twenty-five colonies at this date. During the latter part of July and first of August, the Italians worked on my large English clover by the ten thousands, from morn till dusk. The family house and section boxes tell bad stories on the black bees. It has been said, that blacks are best for storing box honey, my experience is this: give the Italians a Langstroth hive and at a proper time the right kind of sectiins, and they will leave the black bees in the shade. I have no queens for sale. All having Italians in movable frame hives should use an extractor. Comb-foundation and the extractor combined with the Langstroth hive, and well developed intellect, will make the Italian mothers smile, while her sons and daughters will not fail, under ordinary circumstances, to well satisfy their master. Bees are doing but little now, about surplus honey, though, they are feeding an unusual amount of brood. Buckwheat, boneset, golden rod and smart-wead, are abundant and make them a good fall pasturage."
J. B. MURRAY

Berne, N. Y., Sept. 6, '78.

Spring opened very fine, and brood-rearing was far in advance of the usual season, but from May 9th, to the middle of June, we had more or less rain, followed by frosts and cold weather. Swarms that were apparently about issue, killed their drones and did but little. The latter part of June and July has been warm and more favorable. Buckwheat bloomed in August, and bees are doing finely." M. SNYDER & SON.

Jonesboro, Ill., Sept. 9, '78.

"The spring yield was poor, on account of so much wet weather. The last two weeks have been splendid, but I have not had the bees to gather in the honey. They were thinned out by the "bee killer" during the buckwheat bloom. My hives were full of bees when the buckwheat began to bloom, and in less than ten days they looked as if they had been swarming. The "bee killers" infested the buckwheat fields by thousands. I saw them nearly as thick as the bees. It has been a great disappointment. I fed my bees all through July, and had the hives crowded with young bees, to take advantage of the fall flowers." W. J. WILLARD.

Duncan, Ill., Sept. 10, 1878.

"I am trying the Langstroth hive. The bees have built between the end of the frames and the hive. I think there is too much space. As to bees freezing, I think there is more smothered than frozen. I always give my bees more ventilation in winter than in summer. I use a double-wall hive. The bees are protected against both heat and cold. I have had bees for 40 years. I take the AMERICAN BEE JOURNAL and think it the "boss." It interests me much. Success to its Editors." W. H. PIERSON.

[Evidently there was too much space between the ends of the frames and body of the hive. It should be ⅜ of an inch. If more, it is too much.—ED.]

Swanton, O., Sept. 3, '78.

"I had a heavy swarm come out early in May, from a hive that lost its queen; gave it empty combs on July 23d. I extracted one hundred and fifty-eight pounds of honey from one colony, Aug. 26. I have taken nineteen queens from my yard, and had twenty colonies, from which I got nine hundred and eighty-seven pounds of honey, and twenty-four pounds of wax. I left four solid frames to each hive. I only had eleven colonies last April. I would like to get a queen that will produce as many and just as good honey gatherers, and brighter queens, than the one that I have taken one hundred and fifty-eight pounds of honey from.

NOVICE.

Garland, Pa., Sept. 5, 1878.

DEAR EDITOR:—Your suggestions in regard to our National Society awarding prizes at apiarian exhibitions, we think well-timed and appropiate. It is not only necessary that bee-keepers should attend our conventions, but they should be made so attractive, that it would bring both, consumers and producers together for mutual protection against our common enemy—the sharks of our profession, and long may you live to deal sledge-hammer blows right and left, for the right against imposition and fraud, in whatever form it appears.”

JNO. F. EGGLESTON.

Strait's Corners, Sept. 9, '78.

“The honey season has been poor; white clover about half a crop, buckwheat a two-thirds crop. With a good season I should have doubled the amount of surplus. Bees are all strong with plenty of stores for winter. Shall winier twenty colonies in the cellar and thirty-six out of doors, packed in chaff. Is it necessary, in out-door wintering, to cut passages through the combs when they are provided with a passage way over the top-bar of frames, with quilt and one foot deep of chaff in front, and six inches on each side and rear end ?”

J. E. PELHAM.

[Certainly not. The passage-way over the frames will do. Do not leave too much space; two or three sticks placed across the frames, sufficiently large to keep the quilt up high enough for the bees to pass is sufficient.—ED.

Detroit, Mich., Sept. 9, '78.

“I commenced bee-keeping eighteen years ago, when I found out that the cruel process of killing bees to get at the honey was abandoned. Not knowing anything about bees, I was cheated by a soldier of whom I bought twenty colonies, which I had to reduce to twelve in the fall. For safe keeping I put them in a barn. The next winter, a very mild one, killed half of them. I Italianized the six remaining ones, and lost them all in the next two years. After two years I bought one colony in a common box-hive, transferred it to one of my simple box-hives with eight movable frames of the same size as in the New Langstroth hive, and increased them slowly. Now, I always keep them out doors, have sometimes lost none, sometimes one-quarter or one-third, but in the winter of 1874–5, when I went to Germany, I lost all but six. Eight colonies of the twenty-eight which I had last spring, I lost by robbers in my own apiary and from others. They might have been weak, but they were not queenless, because I found brood in every one of them. Of the twenty colonies, I obtained eleven first, and five second swarms. Some four or five colonies brought three swarms, which I put back to the parent-colony. The nine remaining ones gave most of the comb honey which I secured this year, and the extracted winter-killed colonies.”

DR. CARL BRUMME.

Bricksville, O., Aug., 20, '78.

“The only reason why my report is not from one-third to one-half more, is from the entire destruction by fire of all my stock of hives, frames, cases, sections, foundation, etc., at the beginning of the season. I lost four or five buildings and all my stock of bee fixtures. Consequentiy when the swarming season came on I was obliged to place the bees in supers and tops, which of course was not available for comb honey. The season here has been a splendid one and everybody's bees seem to have done well. My greatest difficulty was to get enough sections to keep them going.”

CHAS. S. BURT.

Platteville, Wis., Sept. 9, '78.

“We had a poor season for bees. White clover yielded well, but basswood was a failure. They are at work now on fall flowers. I had to double up some fifteen colonies. My bees in the 'Home Apiary' are in the south-east corner of my land, near the road, and they sometimes sting passers-by. My neighbor on the east, bought the farm knowing the bees were there, and is bothered some by them. Am I liable for damages if they sting those who pass in the road, or sting horses and cause them to 'run' and do damage ?”

E. FRANCE.

[We cannot say how to decide the law point, but if the case were ours, we should move the bees to a more retired place before another sun-set. We have no right to annoy our neighbors, or cause them damage simply for our own gratification. We think common humanity and courtesy would dictate their immediate removal.—ED.]

San Jose, Cal., Sept. 4, '78.

“My yield of honey would have been fully one-third more, but have been Italianizing with a very fine strain of Italians. Received bees from several different ones, but do not find any Eastern strain as fine in color or looks, or as industrious, as our best California raised Italians. My best ones come nearly up to friend Brooks' standard, except the drones are not quite all perfectly three-banded. I think that this State will in time, on account of its climate, produce the very best strains of Italians. Will some one give an essay on the best way to get the Italians off from the combs ? They decidedly object to being brushed off, and shake off very hard.”

S. S. BUTLER, M. D.

Vermont, Ill., Sept. 10, 1878.

“Enclosed find photograph of straw hive, with which I have been experimenting. Straw is 1½ inches thick, very compact and thoroughly painted on outside. The corners are of galvanized iron, and straw is laced with copper wire, and they can be made rapidly.

W. J. ATKINSON.

[After a trial, we would like to hear the result.—ED.]

Rollersville, O., Sept. 4, 1878.

"I have been reading the JOURNAL on the purity of queens. It is sickening. Of course such will be the result of those who take in the Dzierzon theory. I know a man who believes that the earth is flat and four-square, and, like Joshua, that the sun rises and sets. Ever man that has pure bees knows that hybrids are better workers, and fight with the same energy that they work. Is it sufficient evidence that a mule is pure because it can do more work than a horse? Two and three years ago I reared queens from one that never failed to duplicate herself—no black tip nor leather-colored queens, but the color of new gold. Last season I reared from a queen that never failed to duplicate herself, and never produced one with a black tip. I reared fifteen this spring from a queen, and couldn't tell one from another. The balance of the season I bred from any one. Have 80 colonies. ADD BAIR.

Manchester, Iowa, Sept. 15, 1878.

"The season here has not been very favorable for the production of honey. There was only about three weeks that bees did well on white clover. After July 10th there seemed to be no sweetness in the clover, owing, I suppose, to the heavy rains that prevailed; and from that time till buckwheat came in blossom, bees did not gather enough honey to keep them. Since the advent of buckwheat, they have done very well. And now, since the basswood is gone, there is plenty of forage in motherwort, golden rod, smart-weed, &c., so that our bees are getting in good shape for wintering. We have not used the extractor since July 15th, but could do so now with some of our heaviest colonies. This much I have learned within the past year, : that where I sold a man honey last year, I have sold him five times the amount this. And I think that is the way to solve the problem of disposing of our surplus honey, by creating a home market. A. E. BOTSFORD.

New Buffalo, Mich., Sept. 11, 1878.

"This has been a poor season. My bees ate 3 times as much honey last March and April as common, and had to be fed in May. I did not extract any honey until the 16th of July. When I saw the basswood was a failure, I extracted 800 lbs. and had to stop on account of robbing. I thought I could extract about 800 lbs. more, but the honey did not come and the bees ate up a part of their early stores. They have been gaining some for the past week, from golden rod, which is nearly in full bloom now. My bees are at work in boxes, enough at present, to hold 1,200 lbs. but as they are only just now beginning to cap part of it over, I call it 800 lbs. in my report. It is too early to give a report of the fall honey. It is possible to get as much surplus honey after the 10th of this month as before, as the brood-chambers are now pretty well filled with the golden rod honey, which is the very best for wintering bees on; and even for my eating it is better than any clover honey I ever ate. Basswood is best and lightest color [illegible]

R. S. BECKTELL.

Business Matters.

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Seeds or samples of merchandise can be mailed for one cent per ounce, Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Our answer to all who ask credit is this: We sell on **small** margins, and cannot afford to take the risks of doing a credit business. If we did such a business, we should be obliged to add at least 10 to 20 per cent. more to our prices, to make up for those who would never pay, and to pay the expenses of keeping book-accounts with our customers—this we know our **Cash** customers would not think to their advantage.—This rule we must make general in order not to do injustice to any one. The cash system gives all the advantage to cash customers, while the credit system works to their injury. In justice to all we must therefore require **Cash with the order,** for all Apiarian Supplies.

North-western Ohio Convention.

The North-western Ohio Bee-keepers' Society, will meet at Toledo, O., Thursday Oct. 3, 1878, in Druid Hall, at 10 A.M. All bee-keepers and others interested in apiarian matters, are cordially invited to attend our convention, and bring anything of interest to bee-keepers, such as extractors, honey-knives, section boxes, bee hives, frames, &c. Membership fee 50 cents. Ladies free.

W. F. WILLIAMS, *Pres.*
DANIEL KEPLER, *Sec.* Napoleon, O.

[By special request, we shall attend this Convention, at least, for a few hours, on Thursday.—ED.]

Albany County Association.

The Second Semi-Annual Convention of the Albany County, N. Y., Bee-keepers' Association, will be held on Tuesday Oct. 14, 1878, at the Latham House, Chesterville, Town of Westerlo, at 10 A.M. We trust Albany Co. bee-keepers will attend in full force, and do all in their power to make the time spent, both instructive and agreeable. While they are free to bring any hive or apparatus pertaining to bee-culture, we trust that the time of the Association will not be spent in exhibiting them. Bee-keepers in general are respectfully invited to attend.

H. W. GARRETT, *Pres.*
T. F. C. VAN ALLEN, *Sec.*

☞ The Southern Ky. Bee-keepers' Association, will hold its semi-annual Convention at Caverna, Hart Co. Ky., on the 1st and 2d day of Nov. next. A large attendence is expected. And contributions of apiarian supplies for exhibition, will be highly appreciated.

N. P. ALLEN, *Pres.*
H. W. SANDERS, *Sec.* . .

BEE-CULTURE; or Successful Management of the Apiary, by Thomas G. Newman, editor of the AMERICAN BEE JOURNAL.

This is the title of a new pamphlet of 80 pages, which has been carefully prepared for beginners who desire a cheap work, but one up with the times, to familiarize themselves with the fascinating avocation of the management and care of bees.

It is published both in the English and German languages, and is beautifully illustrated. It is cheap, the price being only 40 cents for it, in either English or German.

It embraces every subject that will interest the beginner. Commencing with a short chapter on the Natural History of the Honey Bee, it passes to the consideration of the Situation Stocking and Arrangement of the Apiary, giving minute details of the management and manipulations necessary to make Bee-Keeping a success. It describes all the newest discoveries in the art, by which the production of delicious and health-giving Honey is obtained, as well as how to prepare it for the market in the most attractive shape.

☞ We have gotten a nice Label for Crates, with blanks for addressing, as well as to write the name of the shipper. Price, 15 cents per dozen, postpaid; or 75 cents per 100.

BEES FOR SALE.—See advertisement in In last months JOURNAL. If sold in one lot, I will deduct 10 per cent from the prices there named.

D. CLIFTON.

West Bay City, Mich., Sept. 9, 1878.
"The Excelsior Extractor came duly to hand. I took it home and extracted 325 lbs. with it immediately. I am well pleased with its work."

G. A. WALRATH.

☞ For *nice* Comb Honey, in Prize Boxes, we pay the highest market prices.

Honey Markets.

CHICAGO.

HONEY.—The demand for choice lots of comb honey, in single comb boxes is good, and bring from 11@13c readily; honey in 2 and 3 comb boxes being a drug at 10@11c. Choice extracted honey is quoted at 7@8c: but there is not much demand for it.

BEESWAX.—Prime choice yellow, 23@25c; darker grades, 18@20c,

CINCINNATI.

COMB HONEY—In small boxes, 12@15c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz,, $4.50; per gross, $50.00.

C. F. MUTH.

CALIFORNIA.

HONEY.—Market dull; anything reasonable accepted. We quote as follows: Comb, white, 11@12c.; comb, dark to medium, 8@10c.; extracted, 5½@6½c.

BEESWAX.—Duller and lower; 23@24c.

STEARNS & SMITH, 423 Front St., San Francisco, Cal.

NEW YORK.

QUOTATIONS.—Best fancy white comb honey, new, 17@20c; extracted, new, 8@10c; buckwheat comb honey, 13@15c; beeswax, prime, 27½c.

H. K. & F. B. THURBER & Co.

Local Convention Directory.

1878. *Time and Place of Meeting.*
Oct. 1.—Central Kentucky, at Lexington, Ky.
1.—Union Association, at Shelbyville, Ky.
2.—West. Ill, and East. Iowa, at New Boston, Ill.
3.—North-Western Ohio, at Toledo, O.
8.—National Convention, at New York City.
15.—Albany County, N. Y., at Chester, N. Y.
Nov. 1.—Southern Ky., at Caverna, Hart Co., Ky.
11.—Lancaster County, Pa., at Lancaster, Pa.
Dec. 4.—Michigan State, at Grand Rapids, Pa.
1879.
Feb. 14.—South-Western Ohio, at Lebanon, O.

☞ In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

VISITING CARDS.

Ten Snowflake and 10 Transparent Cards, with your name printed on, and 10 Escort Cards in a neat Case all for **25c.**

BERLIN CARD CO.,
16 & 18 E. Adams St., Chicago.

THE AMERICAN
BEE JOURNAL
Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, NOVEMBER, 1878. No. 11.

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Editor's Table.

☞ H. G. Heckman, Constantine, Mich., has placed an excellent sample of his white clover honey on our table. It is beautifully clear and white.

☞ The North-Eastern Wis. Association have printed their proceedings in a 12 page pamphlet. Those wanting copies should send to the secretary, Mrs. F. A. Dunham, De Pere, Wis., for them.

☞ The island of Cyprus at one time contained nine different kingdoms, and more than a million inhabitants. Owing to the alleged peculiar temperament of its people, it was called "the home of love and beauty."

☞ The Louisburg, Kansas, *Herald.* has over two columns devoted to a description of Mr. Paul Dunkin's apiary. Mr. D., is a successful and scientific apiarist, and well deserves the compliments given by the *Herald.*

☞ Mr. J. E. Moore has sent us a sample of his new crop of honey in his style of box. It is very fine. Also samples of his manner of marketing. He makes those caps for 1, 2, 6 and 12 boxes, and furnishes a wood bottom for them, so that they can be marketed without crating—though they must be crated or boxed when shipped. Friend Moore is a genius, and makes marketing a study, and we are glad of it. Such persons are always a benefit to society.

Seasonable Hints.—In this northern climate, if your bees are not already in winter quarters, lose no time in putting them in at once. See that all have 30 pounds of good, capped honey for winter food; if they have not enough, feed them. Any colonies that are weak should be united, so that they may be strong in numbers. A division board to contract the chamber will be convenient. Cover the frames with a sheet of duck, coarse factory cloth with cotton batting between, or some woollen quilt, to keep them warm and absorb the moisture, and place in the cellar or winter repository. Keep the temperature from 35° to 45°, and see that it is properly ventilated.

If you wish to winter out of doors, protect either by packing in chaff, hay or straw, 3 or more inches thick, with a slanting-board roof to keep it dry, or use a box for packing as described by Prof. Cook in his new Manual.

Having placed your bees into winter quarters, store your mind with bee literature, for it will make you wise and successful,—and then make hives and boxes for next season's operations, or procure them of some reliable dealer. This is very often the most economical way—but don't wait till next spring before you send your order for them, and then get them by express. Order them early and get them by freight, thereby saving expense and worry.

Progressive Ideas.—One important action taken by the National Bee Keepers' Convention, was that in reference to "increasing its usefullness," as reported on pages 378–9 of this issue. We mean particularly its advice to local societies to hold "Bee and Honey Shows" once in each year, at which time manipulations with bees should take place, and competitive exhibits of honey should be made. The National Society decided to offer a "diploma for the most expert handling of bees," leaving the local society to determine the kind of manipulation—whether of transferring, finding and caging the queen, uniting or dividing colonies, &c., &c. And for the best exhibit of honey in the most marketable shape, they agreed to "award a suitable medal."

This is a move in the right direction and must tell for good; educating the bee-keepers up to the right standard and getting them to adopt scientific management, and the most rational ideas. It has a farther intention—that of banding bee-keepers together for purposes of mutual interest, securing a uniform price for honey in each apicultural district. We really think this is the most important move that has been made for many years.

Now, we ask: Will bee-keepers all over the country endorse this policy, by becoming members of the National Society. It will take money to carry out a plan of operations, which is thoroughly agressive, but the dues of each member, (one dollar,) will do it, and carry it forward to success. The name and dollar may be sent either to the Secretary, Dr. E. Parmly, 19 West 38th St., New York; the Treasurer, J. H. Nellis, Canajoharie, N. Y., or to the President, the editor of this Journal.

Providence permitting, we'll show you all, by next summer, something in the line of success heretofore unthought of. Now, how many will endorse this policy? Reader, will you?

☞ Many interesting communications and letters are deferred on account of the Report of the Proceedings of the National Convention. They will appear in our next issue.

New Post Office Ruling.—The Post Master General has issued a circular to Post Masters instructing them to receive "all articles of the third class (excepting in all cases liquids, poison, glass, and explosive materials, prohibited by section 133 of the postal laws), when enclosed in a special tin envelope," a sample of which was sent to the Post Masters with the instructions. This order now admits honey knives, and perhaps queens. We shall see our Post Master and ascertain before our next issue, in plenty of time for the queen business of next season.

Mr. C. O. Perrine, proprietor of the floating apiary, returned to Chicago last month—also his managing bee-keeper, Mr. F. Grabbe. The St. Charles *Review*, of Oct. 19th, says: "The apiary (of 600 colonies) is at present located in Calhoun county, Ill., near the bank of the river, and will remain there till the last of November, or until the yellow fever subsides. The bees will then be loaded on barges and moved down the river to the vicinity of New Orleans, where they can begin work upon the soft maple and the willow blossoms, the latter part of January. Early in the spring the barges will be started up the river again. The design is to travel nights and lay by during the day for the bees to gather honey—the object being to keep the apiary among perpetual flowers throughout the season."

◆

The Southern Kentucky Bee-Keepers' Convention will meet at Horse Cave, Hart Co., Ky., on the first Friday and Saturday in November, at 10 o'clock a. m., to which all those interested in bee-culture are invited. The following subjects will be discussed:

Who should keep bees, and how should they keep them?—Opened by a fifteen-minutes speech by W. Cook; Dr. Whitlock, alternate.

Artificial Swarming—James Ervin and N. P. Allen.

Transferring Bees—W. T. Sears and N. Holman.

Over-stocking—N. P. Allen and J. G. Allen.

Best Location for Bees—I. N. Greer and J. M. Holman.

Which will Pay Best, Comb or Extracted Honey? W. W. Wrtght and R. A. Alexander.

How to Winter in this Climate—J. D. Davis and Jo Adams.

How to Carry Through the Spring—A Simmons and H. W. Sanders.

History of Bee-Culture—Wm. L. Dulaney and J. G. Allen.

Artificial Comb Foundation—N. P. Allen and J. D. Davis.

All questions will be opened with fifteen-minutes' speeches.

All those who are on questions for debate are earnestly requested to be present and prepared to discuss the questions assigned them.

◆

☞ New subscribers for next year will receive the November and December numbers free, as long as they last. So make up clubs at once. Our clubbing rates with other papers for next year will be as follows:

CLUBBING LIST.

We supply the American Bee Journal and any of the following periodicals at the prices quoted in the last column of figures. The first column gives the regular price of both.

Gleanings in Bee Culture	$2 50	$2 25
Bee-Keepers' Magazine	3 00	2 50
The three Bee papers of U. S	4 00	3 00
British Bee Journal	4 00	3 00
All four—British and American	6 50	5 00
American Poultry Journal	2 75	2 50
American Agriculturist	3 10	2 65
Moore's Rural New Yorker	4 15	3 65
National Live Stock Journal	3 65	3 15
Prairie Farmer	3 50	3 15
Scientific American	4 90	4 35
Western Rural	3 50	3 15
Voice of Masonry	4 50	3 75

☞ We have received a nice photograph of C. E. Sweetzer's apiary. It is located in Plain City, Madison Co., O. The array of hives and general business look of things being quite creditable to friend Sweetzer's energy and progressive ideas. We congratulate and thank him for sending it to us. It now graces our Museum wall.

◆

☞ In writing to this office, please do not mix business matters up on the same sheet with articles for publication. It is very inconvenient. Write it on separate sheets, so that the business matter can go directly into the hands of the business manager, and that for publication to the editor—two different persons.

◆

An Apology—I promised to lecture at the recent meeting of the Western Illinois and Eastern Iowa Bee-Keepers' Association, and thoroughly expected to fulfill my promise. But work which I could neither hasten nor defer came upon me to be done, and enforced my absence. I was compelled to telegraph at the last moment that I could not be there. The meeting at Burlington in the spring gave me so much pleasure and profit, that I had looked forward with much interest to the New Boston meeting with its genial associations and its contagious enthusiasm. My unwilling absence was a real regret to me. I hope all the good friends will take this statement as a sufficient apology for what may have seemed an unfaithful neglect.
O. Clute.

Iowa City, Iowa, Oct. 21, 1878.

◆

Local Convention Directory.

1878. *Time and Place of Meeting.*
Nov. 1.—Southern Ky., at Caverna, Hart Co., Ky.
11.—Lancaster County, Pa., at Lancaster, Pa.
Dec. 4.—Michigan State, at Grand Rapids, Pa.
17,—Northwestern Illinois, at Shirland, Ill.
1879.
Feb. 14.—South-Western Ohio, at Lebanon, O.
May 6.—Albany County, N. Y., at Clarksville, N. Y.
6.—Central Kentucky, at Lexington, Ky.
28.—North-Eastern Wisconsin, at Hartford, Wis.
Oct. 21.—National Convention, at Chicago, Ill.

☞ In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

Married.—Sept. 24th, 1878, at the residence of the bride's parents, in Granville, Licking county, Ohio, by the Rev. W. B. C. Rhoads, Dr. W. B. Rush, formerly of New Orleans, recently of Pekin, Ill., to Miss Fannie Asher, of Granville, O.

Friend Newman: Dr. W. B. Rush, well known to the readers of the Journal, has invaded our peaceable little town, and carried away with him one of our fairest daughters, Miss Fannie is the youngest daughter of one of our pioneer bee-keepers. She is well posted in the business, and the Doctor will find an efficient assistant in his accomplished wife. They have the good wishes of all their friends for their prosperity and safe journey through this vale of tears.
W. U. S,

Selling and Shipping Honey.

For a lady of good practical sense commend us to Mrs. L. Harrison, of Peoria, Ill. In a late *Prairie Farmer* she remarks as follows on the subject of marketing honey:

> White comb honey in the "prize box" has only to be shown to be sold. The temptation is too strong to be resisted. I once asked a person if he wished to buy some honey. He quickly answered, "No." I said, "Will you please look at it?" As he politely complied, he uttered a prolonged "O, I must have some of that."
>
> If I had extracted honey to sell, I would visit all the drug stores in my vicinity and ascertain if they were supplied. These establishments use considerable; they put something into it to make it taste badly, and sell it as a sovereign remedy for coughs and colds! Extracted honey, put up in gallon packages, ought to sell well to families, boarding-houses, and hotels. Grocerymen do not seem to understand the selling of it; it gets to be an old settler.
>
> Farmers do more to keep down the price of honey than any other class of people. They do not make a business of keeping bees, and when they "take up their honey," they load it into a wagon, drive to the nearest town, and sell it for whatever they can get. They know little and care less about the price of honey.
>
> The demand for honey is yearly on the increase; formerly it used to be considered as an article of luxury or medicine, but the mass of the people are fast being educated to consider it an indispensable article of food.

☞ Milo Spalding has sent us a sample of drones and asks what we think of them. They are very large, well marked and bright in color. A friend sent to him to get some of the stock, and he informed him that he had none to sell. On inquiring where he procured the queen, he said he got her at the BEE JOURNAL office in Chicago, and wanted to get more of the same stock. Good enough. He can be accommodated next season. We have refused $50.00 for the mother of that queen.

☞ By special invitation of President Cheney, we expect to attend the Michigan Bee-Keepers' Convention at Grand Rapids, Dec. 4th and 5th.

☞ Any one having Vol. I. of the AMERICAN BEE JOURNAL for sale, will please send postal card to this office, stating price.

NEW HONEY SECTIONS.—Mr. G. B. Lewis, of Watertown, Wis., has just brought out something new. They are all in one piece, nicely planed on all sides, and just where the joints should be it is gouged out perfectly true, so as to allow it to be bent into shape. The two outside ends being dovetailed, it goes together easily, and forms a nice box. When glued at the joints it is very solid and strong.

☞ A friend in Penn., writes us concerning an expression in the Sept. No., about the decision of the P. M. General excluding bees from the mails. We said that it would nearly ruin the dollar queen business. We added that "such ought not to be sent out either by mail or otherwise." Our friend wants to know, *Why?* We cheerfully answer: Dollar queens are *untested*, and often prove impure; purchasers unacquainted with Italians suppose them to be pure, and then raise and sell to their neighbors their progeny for *pure* stock, and thus, unwittingly, give Italians a bad name. Such a man called at our office some time since to see Italians; he said he never saw any like ours before, though he had purchased one of some breeder and raised queens from her and sold them to his neighbors for Italians. This is one of the evil results. Hence we said no untested queen should be sent out. Are we not right?

☞ J. Winfield, Hubbardston, O., has sent us a photograph of the Pillar of Honey, on which he obtained the Prize at the Ohio State Fair. It is handsome and caused much admiration while on exhibition. We cannot too strongly urge upon bee-keepers to exhibit their honey at all the neighboring fairs. It will speedily give their honey character and demand at home!

☞ Winter has come in good earnest, apparently; and much earlier than it has done for many years. "Frost and snow" now prevail, as we go to press.

Glucose for Feeding Bees.

We regret that the retiring President of the N. A. B. K. Association so strongly endorsed the use of glucose for feeding bees. It was doubtless a mistake; and when contrasted with the experience of the Rev. J. W. Shearer, as stated, on page 392, of this JOURNAL, it appears exceedingly unfortunate. Mr. Shearer *killed* nearly all his bees, by feeding them glucose, and remarks on page 393 that "there is sufficient acid in the best glucose to kill bees."

Mr. King has tried both the native and foreign article, and says that he "could not eat a piece the size of his thumb nail without vomiting!"

Prof. Hasbrouck remarked that the sulphate of iron, which is not fully removed in its manufacture, caused the difficulty. He also stated that "if pure, glucose is not deleterious." This is the very point we propose to test. We tasted some of that, which was said to be *pure*, a few days ago, and should as soon think of feeding our bees arsenic as any of that vile trash! We expect to give in the next issue the result of a carefully conducted analysis which is now being made in the Michigan State Agricultural College laboratory. Till then we will suspend judgment.

A letter from Mr. L. P. Best, Superintendent of the Davenport Glucose Manufacturing Co., says that it is not true that dry glucose is obtained by using a great quantity of chalk, as stated by Mr. Dadant! He adds: "We are offering $50 reward to any one that will find one per cent. of chalk in our grape sugar." Mr. Dadant has answered this matter on page 375.

It must be a strange infatuation that could allow Novice to say (as he does on page 348, Oct. *Gleanings*), that glucose "for brood-rearing, is even *better than honey!*" Is he not over-worked and worried with his new building on the fair grounds—making him "light in the upper story?" We fear that it may be so, but hope not. His perversion of the language quoted from Mr. Langstroth's work, would seem to indicate a liberal share of insanity! Rest, Brother, Rest! Review and Recant!

◆

☞ At the Iowa State Fair T. B. Quinlan, of Cedar Rapids, had the largest display of nice honey, and took a prize of $10.00 therefor. It is spoken of by the papers in that locality in terms of strong praise. Of course he used the prize box and crate. D. W. Thayer and J. R. Rogers, also obtained prizes for honey. Iowa is a progressive State, and its citizens fully appreciate honey when made attractive.

◆

☞ F. B. Thurber, Esq., is in Europe on business. In his absence a cable despatch was sent him offering him the nomination for Mayor of New York—but he promptly declined the honor.

◆

☞ A bottle of honey sent by *mail*, to the National Convention, in our care, came to hand with the bottle broken and honey all gone—spilled about the mails. There is no doubt about the wisdom of the Postmaster General in excluding such from the mails. Its being forwarded was in disobedience of his orders, and no doubt was visited by a rebuke.

◆

☞ The Paris Exposition Judges have awarded to Thurber & Co., of New York, the "gold medal" for honey and beeswax, while the French Apicultural Society have bestowed upon this firm a "Medal of Honor" for the "best honey in the most marketable shape."

◆

A CURIOSITY.—Postmaster Boughton of Ridgebury, Conn., has discovered in his yard a comb of honey attached to an apple tree. It was made by a small swarm of bees, and the comb is as large as a peck measure, hanging from one of the limbs of the tree. At night the bees cover the outside of the comb instead of resting in a bunch in some one part of it. They do this to protect it from the dew, and so closely do their bodies join as to completely cover the surface. So says an exchange.

Items Caught on the Wing.

We were absent from home, from October 2d till the 24th, and while much might be said of our trip—one sentence will describe the whole of it: —Pleasurable and thoroughly enjoyed everywhere. At Toledo, O., as guest of Mr. J. Y. Detwiler, and as visitor to the North-western Ohio Association then in session, we found old friends as well as *new* ones, and enjoyed our visit exceedingly.

At Cleveland and Kent in Ohio, Elmira, Penn Yan, Seneca Falls, Syracuse and Suspension Bridge in New York, we visited with old friends and relatives, and, of course, had an enjoyable time.

At New York City as guest of Mr. Hoge and in attendance at the National Convention, we received unexpected honors, as well as a hearty welcome. With our old friends, it was a pleasant re-union; and with our newly-formed acquaintances, it was "pleasurable hours," gliding into "days of delight."

At Syracuse we enjoyed a few hours' chat and visit with our fellow-laborer, Mr. G. M. Doolittle. This was an interview we had long desired, and we made the most of the minutes as they glided into "the things that were." Friend Doolittle will, hereafter, furnish our readers with one of his thoroughly-practical articles in every issue of the Bee Journal.

At Hamilton, Canada, as guest of Mr. W. G. Walton, we spent a few "happy hours"—delighting the eye with many enchanting landscapes, as well as cheering the heart with interesting conversation upon bees, and things thereunto belonging.

At Lansing, we spent a few hours at the Agricultural College, as guest of our friend and co-laborer, Prof. A. J. Cook. We looked over the magnificent grounds, and handsome buildings, and were delighted. Such an Institution is a credit to any State, as well as of incalculable benefit to the rising generation.

We have heretofore made many trips through fourteen of the States and Canada, but never was one more full of interest and pleasant reminiscences than this.

◆

Tons of Honey.—One of the wholesale establishments in New York (Thurber & Co.) sold in one week of last month 56,000 lbs. of honey (28 tons), and the next week 27 tons. They expect to handle a million pounds this season. How many millions of bees have spent their *whole lives* in gathering this honey? How wonderful is nature? How persistent the untiring labors of "the little busy bee?"

◆

☞ Some men "know it all;" that is, all that is *worth* knowing. They never learn it of any one; it was evolved from their own massive brain! Such sneer at everything that is progressive, and rail at men of advanced ideas! These men may be sincere, but they are unhealthy and should be pitied rather than reproved. Their "dog in the manger" style of disposition, is a source of misery not only to themselves but all around them. If they live unrespected, and die unregretted, who is to blame? We have a few of such among bee-men—but only a few, we are thankful to say.

◆

Care of Extracted Honey.—The San Francisco *Chronicle* says: "Los Angeles and San Diego counties can vie with the world in the quality of their honey, and the only drawback to extensive foreign demand has been the careless and diversified method of marketing. We are glad to see that there is to be a change in this regard in the southern counties. The process of packing to be pursued in future is described as follows: Upon receiving the extracted honey they place it in large settling tanks of 3,000 pounds capacity, and this, securely covered, is left exposed to the rays of the sun for a day or so. By this process all impurities are eliminated, rising to the surface, and the pure honey is drawn off at the bottom. It is then put up in neat tin cans containing two pounds each, and packed in cases of two dozen each, handsomely labeled. The design is to ship direct to Liverpool, where, with proper management, an extensive market can be worked up."

Honey for Manufacturing Purposes.

The following from the N. Y. *Journal of Commerce* will be read with interest by honey producers:

New York, Sept. 13, 1878.
Editor of the Journal of Commerce:

The bee-keepers in the United States are now securing so much honey that it is becoming an important question how we are to find a consuming outlet for it. Heretofore it has been used simply as a delicacy for occasional table use. You will do a good turn to a good class of men by answering the following questions: Can honey be converted into sugar? To what use can honey be put in manufacturing? What is its relative value as a substitute for malt in the brewing of beer and ale? At what prices could brewers use it? By answering the above you will oblige the owner of 2,000 colonies of bees. J. S.

REPLY.—Here, now, is a fine chance for American chemists. A fortune may reward the man who discovers some entirely new use for honey. We summon American chemistry to answer the question—"To what use can honey be put in manufacturing?" If our correspondent means by "sugar" the crystallized article, we would say that, by no known process, can honey be converted into *that*. Most of its saccharine matter has the properties of grape sugar and cannot be changed into the cane variety by any means yet discovered. And, if this could be done, the operation would not pay, owing to the cheaper materials of the cane fields. Only a series of careful experiments could ascertain the value (if any) of honey as a substitute for malt in brewing ale and beer. In both articles there is a constituent of grape sugar, but they differ in other respects, and the best honey might make the poorest ale. Repeated trials on a large scale alone could decide the question whether honey at a price far lower than the present could be substituted, with a profit, for malt. The latter is now far the cheaper, pound for pound, and the experience of ages seems to have settled on it as indispensable for good brews. Honey, we would add, long ago found its way into a drink called "metheglin." This is a mixture of honey and water, boiled, allowed to ferment and sometimes highly spiced. Mankind has not liked it well enough to accept it in lieu of ale—even the poorest home-brewed.

But what shall be done with all the honey? We will tell inquirers how to make a market for honey or any other good thing. Put up a pure article in a neat style and *advertise it very freely.* There is money in that every day in the year. Future customers are all over the world, only waiting to be reached by proper advertising enterprise, and ready to buy honey for that use (the table) to which it is best adapted.

Honey producers can soon test the value of advertising by getting a few honey pamphlets—with their names as producers printed on them and scattering them over their neighborhood. That we believe is the very best way to create a home demand.

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☞ Novice intimates that honey in his one-pound sections sells readily in Chicago for 4 cents per pound more than in prize boxes! That is *too thin!* We have them in our office, offering them for sale side by side with the prize boxes, at the same price—giving purchasers their full choice of packages; and it is a positive fact that they take ten of the prize boxes to one of the Novice sections!! "*Facts* are stubborn things!" "Figures will not lie!!" These are trite sayings, but sometimes are very forcible! "Beg pardon, Chicago is a great city," says Novice. In this, at least, he speaketh truly,—but its greatness is not yet satisfied with honey put up in "penny packages."

◆

"LIFE AND HEALTH" is the title of a new eight-page quarto paper, devoted to "physical, mental and moral" development. The first number is on our desk, and is full of good things. It will be published monthly at 30 cents for 6 months. It is published by Dr. Hicks, Wernersville, Berks Co., Pa.

◆

☞ The Alabama State Fair takes place in Montgomery, Nov 5 to 9, 1878. We have received a catalogue and invitation to be present, but cannot attend. Let some fine specimens of honey be on hand. No opportunity should be lost to exhibit the products of the Apiary. Judicious advertising will always pay—and that could not be injudicious. It is high time bee-keepers were awake to their own interests.

Austro-German Congress.

Redaktion des Bienenvater aus Bohmen, Prague,
Austria, Sept. 28, 1878.

Hern Thomas G. Newman, Editor American Bee Journal, Chicago :

Dear Friend :—The German and Austrian Congress of Bee-Keepers, will be held in Prague in August (day not yet fixed), 1879. There will be in connection with it an international exhibition of bee-keepers' furniture. Please employ all of your influence to have as many as possible attend, as our guests. Be well assured that you will receive our kindest and most enthusiastic reception. Accept our most cordial salutations, inviting you and the members of the National Association of America to attend, and you shall receive our thrice-fold welcome.

Our newest invention is made by a clergyman, M. Knoblauch ; it is a device hitherto thought impossible—artificial cells and covering for them. This he has already done at the Congress at Griefswald, in the presence of 700 bee-keepers there assembled.

Expecting your favorable answer, I remain truly your friend and servant, R. Mayerhoffer.

The above letter came to hand since the close of the session of the National Convention. As that body has voted to have us represent it at the Austro-German Congress, as well as at other European Conventions of Bee-Keepers, provided we can go when the time arrives, we have pleasure in accepting friend Mayerhoffer's invitation to attend, and unless something unforeseen shall hinder us, we expect to be present and take part in the deliberations of that honorable body.

Kind Words.—During our brief stay in Hamilton, Canada, in company with that sterling apiarist, Mr. W. G. Walton, of that city, we called upon our quondam friend and co-laborer in the art prservative, Mr. Geo. M. Bagwell, Superintendent of the *Times* Printing Establishment. The next issue of that excellent and valuable paper contained the following :

> We received a pleasant call to-day from Mr. T. G. Newman, editor of the American Bee Journal, Chicago, Ill., the best publication of its class in America. He is the guest of Mr. W. G. Walton. during his stay here. Mr. Newman was unanimously elected President of the North American Bee-Keepers' Association in New York City, at the annual Convention on the 8th inst., and was also appointed a representative to attend the Congress of European Bee-Keepers, to be held at Prague, Austria, next August, as well as to attend the several Conventions of the Bee Associations in England, France, Italy, Germany and elsewhere, providing his other duties will admit of his absence. He will, no doubt. exhibit the progress of American scientific bee-keeping at each of the Conventions, if he can be present.

☞ We regret to learn that our friend W. M. Kellogg, was taken sick at the Convention at New Boston, Ill., and has not recovered sufficiently to make out a report yet. It may be expected in our next.

> And of the rest of the words of this Convention—are they not contained in the Book of King's, vol. vi., 11 ?

In language of similar import did the writer of the ancient Chronicles take comfort ! May we not draw consolation, also, from the fact that the essays not contained in this Journal, though read at the National Convention, are inserted in the *Magazine* for this month, and will duly appear in the Journal for December ?

A large portion of the space of this issue of the Bee Journal has been given up to the "Proceedings of the National Convention," knowing full well that thousands are anxiously waiting to ponder them. In order to do this, we have had to omit some departments altogether, and curtail others. This, however, we feel sure our readers will approve.

Petrified Honey Comb.—While in Seneca Falls, N. Y., our friend and Bro. Wentworth, presented us with a piece of petrified honey comb, which he had found on the stamping-ground of old Chief Seneca, in that county. The cells are perfect (but small) and the capping still more so. What stories could it tell, had it the power to communicate ? Bees of some kind (but perhaps smaller) must have exisited on this continent ages and ages ago—long previous to the present race of humanity now inhabiting it. Perhaps even before the ancient "mound builders," whose "coming and going" may have been witnessed by the tiny little bees of a continent, not only unnamed but wholly unknown to the rest of the world in the ages of the "long ago" We have added it to our Museum for the amusement of our visitors.

☞ There are 6,000 colonies of bees in Jefferson Co., Wis. That is what we should denominate "over-stocking"—if such a thing be possible !

☞ Mr. H. K. Thurber gave his individual check for $1,000, to be applied to the relief of the yellow fever sufferers in the South.

Notes and Queries.

Wilmington, N. C., Oct. 7, 1878.

FRIENDS NEWMAN: I enclose samples of two weeds, with labels attached. No. 1 grows taller than No. 2, averaging about 3 to 4 feet high. No. 2 grows from 1½ to 3 feet high, and its bloom seems all at top of plant, and more compact, round and shapely heads of bloom than No. 1. Both have yellow blooms, and the bees work on each with avidity. While No. 2 grows all about the old fields, No. 1 seems to seek moist, rich locations, on the margins of swamps, marshes, &c. They have been in bloom 12 days. Please give name of each in JOURNAL for November. R. C TAYLOR.

These are both solidagos or golden rods. They are illustrated in Manual of Apiary, p. 243. Species of this genus grow on all kinds of soil,—light, heavy, dry or damp. The honey is of a rich yellowish-brown color, of beautiful flavor, and the plants are covered with bees from early August till frost.

A. J. C.

Wyandotte County, Kansas, Sept. 25, 1878.

I enclose insect. Please give me its scientific and popular name, and tell us something of its habits if it has any. as far as known. The people here tell me it is known as the sweat-bee; that it burrows in the ground like a bumble-bee; that it is more aggressive in its attacks, and that its stings are more painful than either the bumble or honey-bee. They say there is another bee still more aggressive than this one, and more painful in its sting, though of smaller size. Should I be able to get a specimen will send it to you if desired. W. P. HOGARTY.

The insect was badly crushed, yet I was able to identify it as a megachile or tailor-bee, the same as described on p. 36 of Manual. It feeds its young or larva on pollen, which it not only carries on its legs but often dusted all over its body, especially beneath. Its leaf-cutting habits, as also its strange cells, are fully described in the Manual. A. J. C.

Columbus, Kan., Oct. 7, 1878.

Please name enclosed plants. Nos. 1 and 2 are covered with bees every day. There appears to be 5 or 6 varieties of No. 3, but the bees work on this one most. No. 4 is nearly out of bloom; the bees work on it most from the middle of August to the middle of September. No. 5 is the best honey plant that we have; the bees work on it from the first of September until hard frost. I had a single colony gather 150 lbs. in 15 days from this plant. My bees are all in good condition for winter. Will winter on summer stands as usual. H. SCOVELL.

No. 1 and No. 2 are asters. These are referred to and figured on p. 243 of Manual. As there stated they are very admirable as honey plants, while many of them—including the ones sent by Mr. Scovell, are very beautiful. There are about two score of species of this genus in our country, and it is not easy to identify the particular species from dried specimens, especially when but a part of the plant is sent; nor is it necessary, as all asters are favorites with the bees.

No. 3 is a solidago or golden rod. For figure and description see Manual, pp. 242 and 243. This belongs to the same family as the asters, and it would seem that all through our country, from Lake to Gulf, and from Ocean to Ocean, there might be a strife between the asters and golden rods as to which should yield the greatest measure of nectar during the autumn harvest. The species of solidagos are about as numerous in the United States as are the asters.

No. 5 is also of the same family. It belongs to the genus bidens, and is so like the flowers of the genus coreopsis that only the botanist can readily determine them apart. I speak of these in Manual, p. 244. These plants are also very valuable for bees.

No. 4 is cassia chamœcrista or partridge pea, the same that was received from A. M. Crosby of Knoxville, Iowa, and named in AMERICAN BEE JOURNAL for September, p. 321. A. J. C.

Washington County, Va., Oct. 22, 1878.

I enclose in an accompanying box, a specimen of a plant growing abundantly in south-western Virginia, and from which bees are storing honey. They gathered more from this plant in the six days of October, than in the previous sixty from all other sources together. A drouth commencing about the middle of July and lasting six or eight weeks, cut off the supply of honey, and colonies were so much reduced in numbers as well as stores, that they were likely to go into winter quarters in a starving condition, but when this plant came into blossom, they went to work with desperate energy, and in a few days had all available combs full of honey, or, to use an old Virginian's expression "are *mighty rich* this fall." Please give the common and botanical name through AMERICAN BEE JOURNAL. G.

The plants which are the subjects of such high praise are asters, which, from our observations here as well as statements made by correspondents (see AMERICAN BEE JOURNAL for October), we are led to believe rank very high as honey plants. They seem also to be indifferent to latitute and climate, nor are they to be ignored on the score of beauty. The flowers before me, as also the ones received last month, are worthy to grace the costliest vase, or decorate the finest parlor. A. J. C.

ALSIKE CLOVER.—In regard to enquiry made by a correspondent in the Sept. No. of AMERICAN BEE JOURNAL, allow me to say: That alsike clover is far better for feeding purposes than red clover. Stock eat it more readily and in preference to other kinds of hay. The only objection to it is, that it has no second growth as with the red. It should be sown with "timothy," as it grows very rank on rich ground. The flavor of alsike honey cannot be surpassed.

O. H. TOWNSEND.

Hubbardston, Mich.

☞Mrs. Isabella D. Lee, of Lonoke, Ark., has land situated in an excellent district for fruit and bee-culture and wants an experienced man to settle there, and start an apiary. If any such are thinking of a new location, a correspondence might be of mutual advantage.

Foreign Notes.

☞ We notice in an English paper of a sale in Lisbon, Portugal, of *sixty tons* of beeswax. "Prodigious."

L'Apiculteur, the French Bee paper, for October, has an article descriptive of the New Langstroth hive, with the manipulating side, illustrated by cuts. Also cuts of the cases for 3 prize boxes as used in that hive. The French apiarists are taking advanced ground and will find the New Langstroth an excellent hive for their purposes.

Foreign Items,

GLEANED BY FRANK BENTON.

The tenth volume of "*Brehm's Theirleben*" has recently appeared.

Otto Schulz, of Bukow, near Frankfort-on-the-Oder, offered 1,000 marks to the manufacturer of comb foundation, (the same to be exhibited at the bee-keepers' association in Greifswald), whose product should equal his in its beauty, quality, and practical use.

At the bee-keepers' exhibition in Hagenau, Alsace. a colony of Italian bees having wasp-like bodies was exhibited. They were bred in Bellinzona, Canton of Tessin, Italian Switzerland.

A noticeable and very practical feature of European bee-conventions is the exhibition that is usually held in connection with each one of them. This is particularly the case in Germany, Italy, and France. At these exhibitions specimens of honey, wax, bees, hives, implements, bee-books,etc., are shown. Prizes are given to the meritorious.

Prof. Dr. Buterow, of St. Petersburg, Russia, writes: "Except in the provinces of the Baltic sea, we have, unfortunately, very few bee-keepers' associations; only in Kiew there is a society, and in Novgorod a bee-association is about to be established. Our bee-culture shows no especial progress—is rather less flourishing than it was in olden times; however, theoretical knowledge and rational management are really spreading themselves more and more in Russia, and we may well hope that a true period of development in the bee-culture of the country is at hand. The free imperial agricultural society aids, so far as it can, in popularizing bee-culture in Russia; in its journals, there is always a department devoted to apiarian topics, so that this journal may now be looked upon as the organ of Russian bee-culture. The association has published, from time to time, descriptions of various apiarian implements, in order to bring them before the Russian bee-keepers as models. The works of Dzierzon, and of Von Berlepsch (the latter under my editorship and published by the imperial agricultural society), have appeared in Russian translations, and are certainly very influential in the spreading of rational bee-culture in Russia."

Th. von Heldenreich, Director of the botanical garden and museum of the University of Athens, Greece, makes the following statements in answer to questions:

1st. Bee-culture in Greece is not an unimportant branch, particularly in Attica, (the honey of Hymettus still keeps up its reputation), in Candia, then in South Euboea; in the vicinity of Karysto, is found a peculiar and delicious honey smelling of roses, called *rhodomeli*, that is, rose honey.

2d. Movable-combs have not been introduced anywhere, and in general arrangements are very primitive; nothing can be said of scientific knowledge among bee-keepers, who are mostly simple country people.

3d. Bee literature does not exist at all.

4th. Apicultural societies are also wanting.

Correspondence.

For the American Bee Journal.

Glucose, or Grape Sugar, for Bees.

In answer to my affirmations that solid glucose is as dear as sugar, and less wholesome to feed bees, Mr. Root, in the October number of *Gleanings*, published a long letter, not from a learned chemist, disinterested in the question, but from an interested party—the superintendent of the Davenport glucose factory.

My letters against the use of glucose were not of sufficient importance to entitle them to notice, but the praises of this article are entitled to a place in *Gleanings*. Such is the way that editor practices impartiality!

In that letter (on page 316 of *Gleanings*), Mr. Louis Best, superintendent of the Davenport glucose factory, writes:

> "Glucose is a heavy gummy syrup of about 40 per cent. glucose, or grape sugar, 46 or 48 per cent. dextrine (liquid glue), and 12 to 40 per cent. of water."

Of course Mr. Best omits to say that glucose contains lime, sulphuric acid, sucrate of lime, etc. He continues:

> "Grape sugar is a concrete mass, without crystallization, of 66 to 70 per cent. grape and glucose sugar, 5 to 6 per cent. dextrine, and the balance water..... Our grape sugar, for feeding bees, is guaranteed to be free from sulphuric acid, and never contains more than 1-50 part of 1 per cent. of sulphate of lime."

At the Bee-Keepers' Convention at Burlington, in May, a bee-keeper exhibited a lump of solid glucose, which he had received from the Davenport factory, through Mr. Root. A chemist, who was there, took a small part of this glucose, and in the afternoon produced a small vial containing about an ounce of a liquid; at the bottom of the vial was a whitish deposit about ¼ of an inch thick. He told us that this white deposit was *terra alba* (white earth) or chalk, contained in the solid glucose that he had taken in the morning.

Here are two affirmations. One from Mr. Best, who says that his solid glucose contains at most 1 part of sulphate of lime in 5,000 parts. The other from a disinterested chemist who, after analysis, shows an immense amount of chalk.

I wonder why bees are so slow in taking a substance containing 66 to 70 per cent. of sugar, while, when they visit the flowers, they bring into the hive a nectar which often contains less than 10 to 20 per cent. of sugar; and especially when we see them eagerly suck milk, wine, beer, cider, etc., if these beverages are mixed with 25 per cent. of sugar, or even less.

Mr. Best acknowledges that his solid glucose has only a sweetening power of 33 per cent., when compared with pure sugar. Then what becomes of the other 35 per cent. of sugar that this solid glucose is said to possess? Honey contains 86 to 88 per cent. of grape sugar. Its sweetening power is equal to 86 or 88 per cent.

Bees live on sugar, and pure sugar is the best food to give them. In solid glucose there is 33 per cent. at most of sugar, which is apparent. In what combination is the other 35 per cent., which are concealed, supposing that they exist? Is not this supposed combination disliked by bees, since they take glucose reluctantly?

Wine made with the addition of honey becomes clear, and ceases fermenting in the fall. Wine made with the addition of solid glucose never ceases to ferment, on account of the sulphuric acid that it contains; it is never well clarified; its color is impaired. Wine made with honey shows its alcohol with the acrometer, while wine made with glucose is heavier than water, and cannot be weighed, as to its alcohol, but with a still, on account of its mineral matters.

How can Mr. Best explain these differences, as he says that the sugar contained in both honey and glucose is the same grape sugar, mixed only with 5 or 6 per cent. of dextrine and water? How is it that liquid glucose, which contains but 40 per cent. of sugar, is worth commercially 5 cents per pound, while solid glucose, containing 70 per cent. of sugar, is sold for 3½ cents? Then the best product is the cheapest. In France it is the reverse: 2,000 lbs. of starch give 2,800 lbs. of liquid glucose. The same quantity of starch gives only 1,867 lbs. of solid glucose. When liquid glucose is worth 5 cents in France, solid glucose is worth 7½ cents. See *Chimie industrielle de Payen*. The present price of glucose in France is: Crystal, 60 to 62; liquid, 40 to 42.—*La Culteur*, Sept. 29, 1878.

Mr. Best is right when he says that the manufacture of solid glucose is not forbidden in France. It is the manufacture of granulated glucose, which is charged with such a heavy duty that it cannot be manufactured with profit.

I read, several months ago, that there were riots in Frankfort-on-the-Main, and in several other cities of Germany, on account of the rise in the price of beer, this increase of price being caused by the brewers being prohibited from using glucose in its manufacture.

In addition to the letter of Mr. Best, Mr. Root quotes from Mr. Langstroth's book, page 273. According to the editor of *Gleanings*, Mr. Langstroth says, in reference to grape sugar:

> "It can be obtained at a much lower price than cane sugar, and is better adapted to the constitution of the bee, as it constitutes the saccharine matter of honey, and hence is frequently termed honey sugar.
>
> "It may be fed either diluted with boiling water, or in its raw state, moist, as it comes from the factory. In the latter condition, bees consume it slowly, and as there is not the waste that occurs when candy is fed, I think it is better winter food."

After reading the above quotation, I opened Mr. Langstroth's book and read:

> "Mr. Wagner has furnished me with the following interesting facts, translated by him from the *Bienen-Zeitung:*
>
> "The Rev. Mr. Kleine says: 'Grape sugar, for correcting sour wines, is now extensively made from potato starch, in various parts on the Rhine, and has been highly recommended for bee food. It can be obtained at a much lower price—'" etc. Then follows that quoted by Mr. Root.

Mr. Root, to help his bad cause, has falsified the quotation, by giving it as the opinion of Mr. Langstroth, while it was only a quotation from a German bee paper!

This falsification will not increase our confidence in the veracity of the editor of *Gleanings*.

I have received from the father of bee-culture in this country, a letter from which I copy the following lines:

"Oxford, O., October 2, 1878.

"MY DEAR SIR :—Please send me your petition, and I will get you some signatures. In the Bee Convention, at Cincinnati, in 1870, I expressed the hope that the time might soon come when extracted honey could be sold at a price which would make it no longer profitable to adulterate it with sugar. That time has about come. I do not believe that either sugar, syrups or honey can be produced profitably at a price which will deter unprincipled men from adulterating them with glucose. Very truly your friend, L. L. LANGSTROTH.

I think this letter, considering its date, a kind of involuntary protest against the course of the editor of *Gleanings*, and the use of his name in favor of glucose !

My friends, I fear this season will prove that comb-honey can no longer be produced at remunerative prices, and that you have to turn your attention to the production of extracted honey. Then is it not to your interest to follow the example of the greatest bee master of our age, by sending a postal card to me for a copy of the petition, to have it signed by your neighbors and returned ?

Hamilton, Ill. CHAS. DADANT.

For the American Bee Journal.

Purity vs. Good Working Qualities.

FRIEND NEWMAN :—Much has been said lately, on the standard of purity, and we have been led to ask ourselves the question, can we adopt a standard of purity, that will always secure to us the best working bees ? We can see, that it would be easy, for friends Alley and Cary, to adopt a standard of purity, as queen breeders, but for us, as honey producers, to adopt the same standard would be quite another thing. The workers, from different queens, of the same color, and general appearance, show a vast difference as to working qualities ; at least such is our experience.

In the spring of 1877, while changing a swarm from one hive to another, we noticed a fine looking orange-colored queen, with the workers all well marked. A neighbor who keeps several colonies of bees was present and remarked, that he would prefer a darker colored queen for business, and we agreed with his decision. No further notice was taken of the colony than of others, till about June 25, when our bees was nearly through swarming. This one had not swarmed but had 60 lbs. of box honey nearly ready to come off. July 3, they gave a fine swarm which was hived. Although the parent colony had none of its queen-cells cut, it never offered to swarm again, and the result, at the end of the season, was 195 lbs. of box honey from the parent and 114 lbs. from the swarm or 309 lbs. from the old colony, in spring.

The queen reared in the old hive was nearly a duplicate of her mother and both colonies wintered without the loss of scarcely a bee, and consumed but little honey in proportion to some of the others. The past season they showed the same disposition, not to swarm, till late ; and from the colony with the old queen, we obtained 161 lbs. of box honey, while there were but few other colonies that gave us over 100 lbs. We have reared nearly all our queens from that old queen this season, and find them all to be very prolific layers, as is their mother. We should be entirely satisfied with them, were it not that a part of the young queens are quite dark, and one or two produce some black bees. We have always claimed that a queen reared from a pure mother would never produce a black worker, no matter what drone they met, and have ample proof that our position is correct. Consequently this queen cannot be pure, and if we were to rear queens for sale, as do friends Alley and Cary, we should not dare use this queen to breed from, but for our purpose she is worth more than a dozen of any other queens we have that come fully up to a standard of purity. G. M. DOOLITTLE.

Light-Colored Drones.

REV. M. MAHIN, D. D.

In the October number of the JOURNAL Mr. J. M. Brooks asks me some questions which I will endeavor to answer. He says : "I will ask our friend, If you have a queen that will duplicate herself in her queen progeny, and produces worker bees that show distinctly (without being filled with honey) the three colored bands, and whose drones are as even and uniformly marked as are the workers, with 3 broad colored bands, all other good qualities being present—industry, size, gentleness, etc., I ask, are such queens pure Italian ? If yes, why ! If they are impure, why ?"

I have never seen a queen or colony such as friend Brooks describes. I have never seen one that would uniformly duplicate herself in her queen progeny. I have never seen a colony of Italians having drones uniformly marked with 3 broad colored bands. The colony coming nearest it was not more than half Italian. I do not say that queens producing very light-colored drones are necessarily impure, but that light-colored drones are no evidence of the purity of the queen or of her worker and queen progeny. I have had many queens that had mated with black drones, whose drone progeny were as well marked as any purely-mated queen I ever had, or ever saw.

I believe it to be a fact that queens that have some black blood in them sometimes produce workers and drones that are lighter in color, than any pure Italian bees ever are in Italy or anywhere else. A pure black queen that has been mated with an Italian drone, will produce a few bees lighter than pure Italians, though the majority may show no trace of Italian blood. I cannot account for it, but I have observed it in most colonies, mixed in that way that I have seen. And, if I wanted to breed very light colored drones, I would select a queen whose mother had one-seventh or more of black blood, and had mated with a pure Italian drone. I would not care what kind of a drone the queen herself had mated with, as I believe the Dzierzon theory. If we could breed a strain of bees, which should be uniformly and distinctly marked, drones as well as workers, it would be desirable ; but if there are any such, I have not seen them. I am satisfied with having the workers uniformly three-banded, the bands being free from spots of darker color.

Conventions.

National Convention.

The North American Bee-Keepers' Association met in Cooper's Institute building, New York, on October 8, 1878, President Nellis in the chair, Thos. G. Newman, Secretary.

The minutes of the last meeting were read and approved.

A number of persons gave in their names and paid their membership fees.

The following delegates from local societies announced their presence to co-operate in behalf of their Associations :

B. O. Everett, N. W. Ohio Convention.
A. E. Manum, Addison Co., Vt., Association.
J. W. Porter, Albemarle Co., Va., Association.
G. W. Batty, E. D. Clark and L. C. Root, North-Eastern Bee-Keepers' Association.
A. Reynolds, Western Illinois and Eastern Iowa Convention.
Theo. F. C. Van Allen and H. W. Garrett, Albany Co., N. Y., Association.
T. O. Peet and E. Parmly, N. Y. City Association.

President Nellis then addressed the Convention, as follows :

Ladies and Gentlemen of the National Bee-Keepers' Association:

I cannot but feel thankful to you for the confidence you manifested in choosing me as your presiding officer, and yet I have a sense of regret that I have so poorly performed my duties and advanced the interests of the Association.

Another year of care and labor has passed since last we met, and I hope not without its lessons of knowledge and profit. We have great reasons to thank the Father of Mercies for a continuation of our being, and for the temporal blessings that we, as a nation, and especially as a class, enjoy.

I trust we have assembled to compare our experiences in a spirit of generosity, and that we will carefully guard against quoting as fact, what with us may be only theory. Above all, let our deliberations be characterized by harmony, and by a sense of delicacy that shrinks from saying or doing things in a deliberative body that may wound the feelings of any present.

Although the honey-bee has been domesticated since the earliest period of man's history, yet, not till within a recent date, say half a century, has its culture been made an exclusive or remunerative business.

The apparatus used and management adopted have been so greatly improved, and the business has lately assumed such wonderful proportions, that a retrospective glance astonishes, and the inquiring mind, peering into the future, exclaims, "What next ?"

Although the inventions and improvements of the past year may not have been equal to some of its predecessors, yet we see marked advancement. Bee-keepers are fast adopting standard hives, of which we now have less than half a dozen. Then, too, surplus honey is being stored more uniformly in neat, marketable packages. (Thanks to Messrs. Thurber, for assisting to this desirable end by offering a gold medal.)

The use of comb foundation is becoming universal, and the article has been so much improved that the two greatest objections to it, namely, sagging and breaking down, and a thick, hard centre in box honey that is unpalatable and easily detected, these objections, I say, are now removed, the first by incorporating fine wire in the sheets ; the latter by making the bottoms of cells thinner than in the natural comb. I will explain no further. Samples are here on exhibition that will convince the most skeptical.

Recent experiments convince me that at no distant day grape sugar is destined to play an important part in the economy of honey production. It is valuable for stimulating brood-rearing, and seems equally useful as winter food for bees in conjunction with honey. Its low price and adaptability to the purpose named, will soon bring it into general use among bee-keepers.

Intelligent men, whether engaged in a business or contemplating it, desire to know something regarding its future prosperity and advantages. To my mind, the future prospect of bee-culture was never better. So long as the inhabitants of the globe consume over 2,500,000 tons of cane sugar per annum, so long will bee-keeping not be overdone. We must study to economize the labor of production, till we can make a profit and sell honey at the price of cane sugar. Then will we find ready sale for our products in our own neighborhoods, and save the expense and anxiety of marketing, now so manifest.

To accomplish this, we must be energetic, and have a thorough knowledge of the business. In my opinion, too little attention is paid to the fact that localities can be overstocked, with bees—the result no profits, and the owner does not know why. I am convinced that in Central New York, to afford the best results, not more than 60 colonies should be kept on a section (640 acres) of good, fertile, honey-producing land. We grant, there are localities that will sustain three times this number ; but I speak in general terms.

From a considerable correspondence, and from, to me, ascertained facts, I believe this average would apply to most other parts of our country. Small apiaries, in the hands of experienced men, produce marvelous results, the public statements of which are not generally accredited. Investigation shows that with these men all things are done properly and in season. A man residing not many miles from me, has for 6 or 8 years kept just 60 colonies, and during that period he has averaged a yearly production of 6,000 lbs. of box honey. He does not indulge in wild aspirations. He has mastered his trade, and has learned the capacity of himself and of his locality. He is accomplishing far more than many with five times his number of colonies, who bluster about, and perhaps ultimately give up bee-keeping in disgust. We must not draw exaggerated pictures of the profits to be secured in bee-culture, but we can say to the man seeking a fair recompense for his labor, that in no other business do we see better prospects for success with so small a capital stock. I know many will accuse me of having an axe to grind, as I sell supplies for the apiary ;

but I assure you I am expressing a candid opinion.

I often envy the independence of the man who, when his bees are housed for the winter, has a considerable period in which to visit his friends, and in which to improve his knowledge and intellect. The social advantage of these periods cannot be overestimated.

Of course, I would advise all apiarists to make ample and intelligent preparations before the busy season comes, for, be it remembered, in summer, the man with leisure in winter has his abilities taxed to their full capacity.

I apprehend not so much the over-stocking of the markets with honey as of localities with bees. Note this carefully, and locate your apiary so as not to injure each other.

The great honey product of California will very soon be transported to Europe directly by water, thus leaving us a clear field. Our duty, then, is to thoroughly master our occupation, and use our influence to bring honey into general use—first, by making it compete in price with other sweets; and secondly, by educating the public to its general use. Mr. Newman, of the AMERICAN BEE JOURNAL, has issued a very useful little work that all bee-keepers should circulate in their neighborhoods. I refer to the pamphlet, "Honey as Food and Medicine."

Our English brethren, although not as well advanced as we in bee-culture, have put us to shame in the matter of conventions and displays of bees and their products. I think their manner of exhibiting the manipulations of bees to the general public worthy of our consideration and emulation.

At our last meeting a committee was appointed to consider the best plans for placing the National Association on a permanent footing. I hope the committee can at this time report some feasible method.

System and concerted action are what we need to permanently establish our occupation, and make it take rank among the important industries of the nation. No stronger argument can be presented for encouraging the representative plan of holding conventions than this: That system in management, system in the style of surplus receptacles, and system in marketing of honey, can be developed, while at the same time we come in contact with each other, and with the buyers and consumers of our products, and thus learn their wants and our deficiencies. "Order is heaven's first law," and order and concerted action are necessary to the proper development of any business.

In one of our papers I notice an article regarding the purity of Italian bees, and the writer urges the necessity for an established, recognized standard by which to determine the purity of those bees. I fully endorse that suggestion, and recommend that the matter be considered in this Convention. I throw out as a suggestion, that possibly we can improve the hardy qualities of our bees. You are aware that flies, wasps, bumblebees, and many other insects, do not chill or get benumbed as quickly as honey-bees. By long and careful breeding, may we not improve our bees in this particular, making them hardier and able to work in weather too cool for them now? I leave this matter to your consideration.

In closing, let me draw your attention to a bad precedent established at the last Convention, viz.: The giving of a present to the retiring President. I suggest that this be not repeated, lest it become an established and pernicious custom.

Requesting that with unselfish purpose, we adjourn from here to some prominent city of the West, I shall not burden you longer.

The Secretary read the following as his report for the past year:

To paid for tables, &c., in Am. Inststltute Fair.		$15 50
To paid for printing addresses and postage.....		25 00
		$40 50
Received from late Treasurer............	$5 00	
Received membership fees................	34 00	
		$39 00
Deficit..		$1 50

In accordance with the resolution passed at our last meeting, your Secretary has had 1,500 copies of "The Facts for the People" printed and mailed to the most influential papers of the nation, and has had marked copies returned containing the Statement of Facts.

Postage, 1,500– 1c..................................	$15 00
Envelopes and printing 1,500 copies	10 00
	$25 00

Report of committee on "the best means of promoting and advancing the interests of the National Bee-Keepers's Society, and to increase its usefulness:"

"Strike while the iron is hot," is a common saying, and a very good one. It indicates the danger of delay and the importance of prompt action; but Cromwell said, "Make the iron hot by striking."—thus enforcing another thought, that "Where there is a will there is a way;" that to good sense, industry and perseverance, *no right thing* is impossible! As by continual striking, the cold iron can be heated, so, by constant and well directed work, the most difficult undertakings may be conducted to success!

Two years ago, when we met at Philadelphia, the question was: "*Shall the Society continue to exist?*"—now it is: "How to *increase* its usefulness?" We have had to take Cromwell's advice, and "Make the iron hot by striking!" Now let us "not be weary in well-doing"—and continue the vigorous use of our sledge-hammers; let us demonstrate that we both *can* and *will* bring our undertaking—though it be difficult—to a *complete success.*

I will not weary your patience, but come at once to our recommendations. Three things are essential to the *usefulness* of the Society, and these three things will "promote" and "advance" its interests:

1. It should foster *Local* Societies, seeking a delegation from such at its annual sittings—making this Society, as nearly as possible, a representative body.

2. It should encourage a Local State Exhibition once a year, having manipulations with bees in each State and Territory.

3. It should give its hearty support to these "Bee and Honey Shows," by appointing a suitable person or persons to attend them, and in its name and by its authority, to award a suitable medal for the best exhibit of honey in the most marketable shape, and

a diploma for the most expert handling of bees.

In order to do this, let the amendments to our Constitution of last year be reconsidered, and sections 3 and 10 be reinstated—electing a Vice President in each State and Territory, who shall co-operate with the Society's Representative, in awarding the bee and honey-show prizes in his locality.

To do this, financial aid will be absolutely necessary; but if it be done, a thousand members can be obtained, and the funds thus raised will carry out the provisions of these recommendations, as the Representative should be entitled to call upon the Treasurer for a milage fee of say 3 cents per mile, to cover traveling expenses to and from these honey and bee shows, whenever a medal is to be awarded.

We recommend that a committee be appointed to procure medals and diplomas.

THOMAS G. NEWMAN.

Mr. King, another member of the committee, remarked that the report, as a whole, met with his approval, though some details should be discussed to ascertain the best means of obtaining the desired results.

The report was adopted, and Articles 3 and 10 of the Constitution were reinstated in their former position, having been suspended at the last session.

The following were appointed a committee of arrangements: T. G. Newman, L. C. Root and E. J. Oatman.

Dr. Parmly was appointed Secretary *pro tem.*, in the absence of the Secretary, who was engaged on the committee of arrangements.

A. J. King then read the following essay on the

RISE AND PROGRESS OF BEE-CULTURE.

All the great inventions and discoveries which have developed the resources of the world to a greater extent within the past century, than in all previous time since the creation, have had their origin, more or less remote, in the ages past. The various applications of steam, electricity, the mechanical powers, and the wondrous developments of natural science which have so changed the face of all nature, and the currents of thought within the past few years, are but the accumulations and scientific combinations of ideas and inventions, scattered all along the line of the ages, by the past generations in their onward march from ignorance, superstition and bigotry to intelligence, knowledge and true science. Of all the fields of research in the development of National industries, none are more fruitful, inviting, and instructive to the Antiquarian than the history of the culture of the honey bee, for in all his researches, he will find himself in the company of the wisest and best minds of all ages. Poets, Naturalists, Philosophers, and Doctors of Divinity are all largely represented in its history. Honey was regarded by the Ancients as a present from the Gods, and with it their libations were made around the tombs of those dear to them. With honey they preserved their corpses. With honey their Gods were appeased by pouring it on their altars and the heads of the victims. Honey was the only sweet known until within comparatively modern times. The Holy Scriptures abound in figures of the highest joys and the most exquisite sweetness, drawn from the bee and its delicious product. Aristotle pronounced the honey bee a magazine of the virtues. Virgil, the most elegant of the Latin poets, calls it a ray of the divinity, and chose it as the subject for the best of his Georgics. Shakspeare, Milton, and, in fact, all the prominent writers, have bestowed on the bee, at least a passing notice. DeMonfort, who, in 1646 wrote a work on bees, estimates the number of authors who had written on this subject previous to his time, at between five and six hundred, the larger part of which are lost, but traces of most of them have come down to us through works published in the 17th century. These works, one of which was written by DeMontfort, seems to unite the ideas of the Ancients with those of his own time. And the most romantic and foolish reveries stand side by side with sensible views, and in many instances the two are so badly mixed, that to give in full the various views which have prevailed, at different times in the past history of bee-culture, would bring a result similar to what Milton says of the writings of the Fathers—a huge drag net, brought down the stream of time, filled mostly with sticks and straws, pebbles and shells, sea-weed and mud, with a pearl in the oyster here and there. We shall confine ourself to the merest outline of this history and endeavor to select as many of the pearls as we can, in passing.

Of the antiquity of the bee, we cannot speak positively, but the geological evidences of flowering plants, demanding insects for their fertilization, together with the remains of insect-feeding reptiles, as well as herbivorous animals, places the bee, at least presumably, ages anterior to the creation of man. The positive proofs of its early domestication are ample. The Ancient Egyptian sculpture and tablets abound with hieroglyphics, wherein the bee is the symbol of royalty, their economy being represented with a monarch at its head. In most instances these representations are *rude*, and betray a lack of close observation, as the bee is pictured with two wings and four legs; however, on one tablet of the twelfth-dynasty, the bee is figured correctly, having four wings and six legs. *Shuckard*, in his "British Bees," gives us indications of a still higher antiquity from the *Sanskrit*, wherin *Ma* signifies *honey; Madhupa, honey-drinker*, and *mad-humkara*, honey maker. He also traces the same in the Chinese dialects. The earliest Shemitic and Aryan records, the Book of Job, the Vedas, as well as the Poems of Homer, are conclusive proof of the early domestication of the honey bee, all of which are interesting to the student of Apiculture. Of the origin of bees, the ancients indulged the most extravagant fancies, some contending that they originated from the putrid carcasses of animals, —probably from witnessing the transformation of insects as millers from moth worms, butterflies from caterpillars, etc. They give receipts to produce swarms of bees, the details of which are too disgusting to relate Others, of finer and more poetical concep tions, imagined that bees were bred from purest juices of the summer flowers. Virgil expresses something of this opinion in the following from the fourth book of his Georgics: "Chiefly you will marvel at this custom, peculiar to the bees, that they neither indulge in conjugal embrace nor softly dissolve their bodies in the joys of love, nor bring forth young with a mother's throes; but they themselves, cull their progeny with their mouths, from leaves and fragrant herbs. They themselves raise up a new king, and little subjects, and build new palaces of waxen realms." With all these false notions of bees, the ancients still possessed much valuable knowledge. To Aristotle and Virgil we are indebted for the first description of the Italian bees, which, until recently had been regarded as a myth. Virgil remarks as follows regarding the two varieties: "For the one looks hideously ugly, as when a parched traveler comes from a very dusty road and spits the dirt out of his dry mouth. The others shine and sparkle with brightness, glittering with gold. This is the better breed. From these at stated seasons of the sky, you may press the luscious honey, yet not so luscious, as pure and fit to correct the hard relish of the grape." Again he says: "There are two sorts, the glorious with refulgent spots of gold, and is distinguished both by his make and conspicuous with glittering scales. The other is horribly deformed with sloth, and ingloriously drags a large belly."

Aristotle lived three hundred years prior to the Christian era. He wrote largely on every department of natural history. His pupil, Alexander the Great, placed at his disposal large sums of money, and employed, during his campaign in Asia, more than a thousand persons in collecting specimens for his use from all parts of the animal kingdom. From his pen and those of his pupils we are indebted for much information of value in bee-culture. Columella about the commencement of the Christian era, wrote a large work on "Husbandry," in which he gives directions for the artificial swarming of bees. Supplying queens to destitute colonies. Transferring hatching brood to weak colonies, and many other useful operations of which the great multitude of bee-keepers are ignorant to this day. Varo and Pliny also wrote in a manner which pre-supposes quite a knowledge of the brood-nest, all of which leads to the belief that in those early classic days a very advanced knowledge of bee-culture prevailed. What is known in history as the "dark ages" now came on, and for the space of nearly fourteen hundred years no progress was made in any department of natural history, but on the contrary much was lost.

At the close of this dark era of mental darkness the celebrated John Ray appeared. He collected and arranged all which survived of the previous productions on entomology. Ray was succeeded by Linneus, the inventor of the binomial system of classification which is still used by all investigators of natural science. At the close of the 17th century Swammerdam, Maraldi and Reaumur wrote extensively on bees and hives, and Shirach, Reims and others still later.

These writers discovered many of the facts connected with the secret workings of the hive, which contributed largely in raising the vail of ignorance which still enshrouded this industry and paved the way for the prince of apiarians—the great Huber, who appeared about the close of the 18th century, and with whose history every apiarist, worthy the name, is more or less acquainted. He it was who combining in one the unicomb observation frames of his day, removed their glass sides and gave to the world the first movable frame bee-hive in existence, and by the aid of which he made those beautiful experiments which placed the science of bee-keeping on the enduring basis of truth. Experiments which established one by one nearly all the wondrous facts connected with the natural history of the honey bee, by the adoption of which bee-keeping has gradually assumed national importance in all civilized countries. It is a fact that the blind Huber, through the eyes of his faithful servant, Francis Burnens, saw more and did more for rational bee-culture than any one man before or since his time. The correct theory once established, prominent naturalists adopted it. Authors and inventors sprang up on every hand, and movable frame hives of different patterns were soon in use in various parts of Europe. Munn, of England; Berlepsch, of Germany, and De Bovois, of France, being the most prominent, and all of whom have written extensively on the subject of bees and hives. It is estimated that from Shirach up to about 1847, one-hundred and twenty-four books were written on bee-keeping. Apiaries sprang up of larger dimensions than ever before; some nobleman owning as high as eight thousand colonies. The discovery of the refining of sugar, made by the Venetians about the middle of the 16th century, was at this time in full blast in Germany and served to distract attention from the production of honey, and sufficiently accounts for its decline about this time.

The engraving and description of the Munn movable frame hive may be found in "Cottage Gardener's Chronicle," London, 1843, page 317, also in the author's pamphlet in 1844. The De Bovois' movable frame hive, which was almost identical with King's American bee-hive, is fully described in the author's large book on apiculture, published in France, in 1847. The Berlepsch hive invented in 1840, was greatly improved in 1845, making it almost identical with the Langstroth. He further improved it and published an illustrated description in the *Bienen Zeitung*, for May, 1852. But bee-culture in Europe was by no means carried on principally by those using movable frames. On the contrary the great majority used either the straw hive, wooden gum or square box, with bars crossing the top, to which the combs were attached, and then either the storifying, nadir and collaterial system were resorted to for surplus honey.

At one time in France bee-keeping was deemed of so much importance that in some places laws were enacted rendering it imperative on every cottager to keep at least three hives of bees, or in lieu thereof to pay a certain fine into the treasury. In England large rewards were given for the finest display of honey and beeswax of one's own raising, and obtained without sacrificing the lives of the bees. Prominent men wrote books on the subject designed entirely for the benefit of the cottagers, and the same unselfish course is still pursued in Europe.

A brief mention of some of the most useful inventions and discoveries must close our notice of the progress of bee-culture in Europe. Dzierzon discovered the parthenogenesis of the queen bee, and Siebold, Leukart, Berlepsch and other eminent German naturalists demonstrated it. Dzierzon also discovered flour to be a substitute for pollen. Mehring made the first artificial honey comb foundation. Major Von Hruschka invented the honey extractor. The bellows smokers so well adapted to the apiary have been used in all parts of Europe for the past one hundred years or more. Some had straight and some bent nozzles, and some of the nozzles were hinged to the bellows and were turned at right angles for draft when not in use, and also to receive the materials for the smoke. These might have been appropriately called breech-loaders.

Reaumur first described artificial fertilization of queens in confinement. His experiment called the "Amours of the Queen Bee," made under a glass vessel with the drones is exceedingly funny and sounds very modern, but is too lengthy for notice here.

Bees came with the Pilgrim Fathers to America, and were carried by the early pioneers to all parts, until now they are to be found in every portion of the Western Continent, but owing to the many toils and cares incident to the development of a new country, together with their lack of knowledge of the subject, little attention was paid to bees until within the past thirty or forty years.

The first record of a movable frame hive in America may be found in the *Cultivator*, for June, 1840, by Solon Robinson, now of Jacksonville, Florida. The second invention may be found in the *Scientific American* for March 6th, 1847. The inventor, Mr. Shaw, of Hinckly, O., I believe is still living. Movable frames were also used by Marcus Robinson, at Jamaica Plains, Mass., in 1848, and varied in no respect from the Langstroth frame and hive. This on the affidavit of Solon Robinson. The same style of frame was used about the same time at Danvers, Mass., as per the affidavit of Mr. Putnam, of Galesburg, Ill. These affidavits are on record in the office of the Hon. A. F. Perry, corner of Main and Third streets, Cincinnati, Ohio.

Harbison, Townley, Flander, Metcalf and some others claim to have known of movable frame hives between 1845 and 1850. A few books were written on bees about this time, but possessed little merit either in theory or practice.

About 1852 the Rev. L. L. Langstroth patented the hive which still bears his name and which many prominent bee-keepers still use with but slight modifications. This gentleman took hold of the matter in earnest. He sold large portions of the territory covered by his patent to influential and wealthy men who, in connection with himself, introduced the hive far and wide and thus demonstrated that a patent is not necessarily an evil, as many seem to suppose, for it proved in his hands a powerful means of advancing the true science of bee-culture. This he soon followed up with his book "The Hive and the Honey Bee," which is perhaps the most complete and scholarly production of its kind ever written in any age or country, and shows its author to have been perfectly familiar with the best literature on this subject in the Old World, and a perfect master of both the science and practice of bee-keeping. To Mr. Langstroth—although not the first—more than to any other man, are we indebted for the introduction of new races of bees to mix with our own, and thus prevent the evil of in-and-in breeding.

The "Mysteries of Bee-keeping Explained" appeared simultaneously with Mr. L's book. The author, the late lamented M. Quinby, showed in this work a familiarity with the economy of the bee truly astonishing to one writing at that time. It was eminently practical, and did much valuable work for the advancement of rational bee-culture. He also invented the best form of a bellows smoker then in use and this has been further improved by the addition of the direct draft principle invented by Mr. T. F. Bingham, which leaves nothing more to be desired in this line.

Mr. Quinby wrote largely for the Agricultural press of the country. He freely gave all his ideas and inventions to the public for the promotion of the cause he loved, and labored faithfully to raise bee-keeping to the dignity of a distinct profession. The quiet, noble self-sacrificing spirit manifested by this *truly* great man, will be talked of and cherished and felt so long as the keeping of bees shall engage the attention of men. The writings of Mrs. Tupper, the Harbisons, Metcalf, N. H. & H. A. King, Prof. Cook, and others, have done a vast work in bringing about the present advanced stage of bee-keeping in this country. While A. I. Root, T. G. Newman and your humble servant, realizing that "constant dropping wears out a stone," are constantly pelting away at the superstitions and prejudices of the people, and hope, ere long, to end the battle in complete triumph. The most convincing arguments, however, are those which appeal to the *palate*, and *pocket*, and these are being effectually used by Harbison, Hetherington, Doolittle, Betsinger, Clark, C. J. Quinby, and many others, in the shape of tons of honey as beautiful and pure as the nectar which Jupiter sips. And this is being distributed all over the world by Thurber, Quinby, E. & O. Ward, Thorn & Co., of this city, Muth, of Cinn., Vincent, of N. O., and by the large dealers in other cities. We learn from statistics that there are now in the United States about 1,000 different bee hives covered by patent, and a still larger number unpatented. Nearly all the inventions of European origin have been greatly improved by our Yankee ingenuity, and men everywhere are waking up to the importance of this industry as never before. The aggregate yield of honey is largely on the increase, besides the quality and quantity, and the methods used in America are far superior to any other country, and these facts, taken together, are creating a fear in the minds of some of our most thoughtful apiarists that the prices received for honey may fall below the cost of production, so we will present a few facts which we think may tend to allay these apprehensions. Great Britain consumes annually about 9,000,000 lbs. of sugar for brewing purposes. Other foreign countries, as well as our own country, a proportionally large amount. It is a fact that extracted honey contains a much larger percentage of the elements needed as a substitute for malt than sugar does, and is cheaper at 90 cents a gallon, than sugar is at the lowest prices it has yet reached. A desirable change by substitution is now going on and may be greatly hastened by well directed efforts on the part of honey dealers. Second. Not more than 2-5ths of our people have yet learned to eat honey, not because it is not generally acceptable, but it has never been brought to their notice as a staple article which may be had at the same price as the best quality of syrup, and that it is far more healthful.

Third. A large percentage of the syrups in general use in our families are badly adulterated, and positively unfit for the human stomach, and particularly the stomachs of children. This fact is fast being recognized by the most intelligent of our population, and only needs a little judicious pressing through the papers to displace it, and in its room put extracted honey.

Fourth. Laws against the adulteration of honey, affixing such penalties of fine and imprisonment as shall afford complete protection to the producer, the honey dealer and the consumer. Steps should be at once taken to effect this desirable result, before some other unprincipled honey dealer shall cause Great Britain to give us the second slap in the face through their leading papers, by branding us as a set of swindlers, and warning the English people against the use of American honey.

A petition setting forth this matter in its true light should be presented to Congress at its next session. All the members of this National Convention, including all dealers in honey, should be asked to sign this petition, and a refusal from any cause whatever, should be regarded as favorable to honey adulteration, and producers should be warned against selling such persons their honey. Such a petition, praying for so laudable an object, and backed by so many honorable names, could hardly fail in obtaining the desired law, when extracted honey would at once advance to its true position in all our markets. Bee-keepers everywhere should be united in bringing about these needed reforms, and imitating the politicians, should "keep it before the people" till the end is attained. The journals devoted to bee-keeping should be bold and out-spoken on this subject, regardless of all present emoluments for a contrary course, and for one, I here and now pledge the *Bee-Keeper's Magazine* to this policy without the least equivocation or mental reservation, and I expect to see friend Newman, of the AMERICAN BEE JOURNAL, to join hands, and then, by a rising vote, test the sense of this Association, and thus make a significant stride in the true progress of bee-keeping in this country. A. J. KING.

A vote of thanks was presented to Mr. King for his able address.

An election was then held for officers for the ensuing year. T. G. Newman having been placed in nomination, and the Convention expressing their approval so enthusiastically, it was moved that Mr. A. J. King be instructed to cast the vote of the Convention, by ballot, for him, which was accordingly done, electing him President.

The following were elected Vice Presidents :

J. R. Lee, Huntsville, Ala.
Dr. W. Hipolite, Duvall's Bluff, Ark.
C. J. Fox, San Diego, Cal.
J. L. Peabody, Denver, Col.
F. I. Sage. Wethersfield, Conn.
Jesse B. Watson, Vermillion, Dakota.
Dr. J. W. Keyes, Iola, Fla.
Dr. J. P. H. Brown, Augusta, Ga.
E. J. Oatman, Dundee, Ill.
Rev. M. Mahin, Logansport, Ind.
O. Clute, Iowa City, Iowa.
N. Cameron, Lawrence, Kan.
R. M. Argo, Lowell, Ky.
W. H. Ware, Bayou Goula, La.
Prof. C. H. Fernald, Orono, Me.
D. A. Pike, Smithsburg, Md.
Henry Alley, Wenham, Mass.
Prof. A. J. Cook, Lansing, Mich.
C. F. Greening, Grand Meadow, Minn.
Rev. J. W. McNeill, Crystal Spring, Miss.
Dr. J. W. Greene, Chillicothe, Mo.
George M. Hawley, Lincoln, Neb.
R. C. Taylor, Wilmington, N. C.
J. L. Hubbard, Walpole, N. H.
Rev. J. W. Shearer, Liberty Corners, N. J.
P. H. Elwood, Starkville. N. Y.
B. O. Everett, Toledo, Ohio.
Rev. W. F. Clark, Guelph, Ontario.
W. J. Davis, Youngsville, Pa.
S. C. Dodge, Chattanooga. Tenn.
Judge W. H. Andrews, McKinney, Texas.
John Chatterley, Cedar City, Utah.
J. W. Porter, Charlottesville, Va.
E. W. Hale. Wirt, W. Va.
A. E. Manum, Bristol, Vt.
Christopher Grimm, Jefferson, Wis.
Thomas Valiquet, St. Hilaire, Quebec, Canada.

Some not being members, it was moved they be made honorary members, without the payment of initiation fee, and that they be requested to advance the interests of the Association by correspondence, reporting the condition of bee-keeping in their respective States, &c., and if they cannot act, to name such as can fill these duties.

The following were unanimously elected:

Recording Secretary—Dr. Parmly.
Corresponding Secretary—Prof. Hasbrouck.
Treasurer—J. H. Nellis.

WEDNESDAY MORNING.

After calling the Convention to order, the President delivered the following address :

To meet you on this auspicious occasion is indeed agreeable. To unite with you in the discussion of themes that are all-absorbing to every apiarist, will be to me a pleasure—the more so, because this Association is not only National in name, but also in its influence and might; many of its members being among the foremost in scientific explorations in the apiary, and even their *names* are "household words" around many a distant hearthstone. And when, by means of that mighty lever—the Printing Press—is transmitted to a world your "thoughts that breathe and words that burn"—they echo and re-echo to "earth's remotest bound."

It is exceedingly agreeable to witness the harmony that has prevailed so far, and now, as the time will be mainly given up to discussions of themes of vast importance—themes upon which we have not arrived at a union of sentiment, let the arguments be strong and well matured, but let no *harsh word* mar the beauty or strength of even one argument or speech. Let us all remember that we speak not only to the hundreds that are present, but also to the thousands that are absent, who in almost breathless silence anxiously await the published report of our proceedings. A stenographic reporter is present who will take down every word we utter—"Let us, therefore, take heed to our lips, that we offend not with our tongue."

What we need is co-operation! Concert of action! Oh! how the weary and burdened soldier on the battle-field, likes to feel that he is not alone—that his elbows touch those of his comrade! How refreshing it is to him to know that a brother is fighting by his side for the same soul-inspiring cause, in defense of the same hallowed principles! How it adds to his assurance, strengthens his nerves, and cheers his spirits!

As a band of brothers we should stand side by side with our fellows, and cheer by our presence, our counsel, and our inspiration, while fighting for the same result.

By a bold and united dash, we may storm the citadel of public opinion—and having "the best honey in the most marketable shape," inscribed upon our banners, we may scale the walls of a "weak market," placing upon the topmost round of public demand an unceasing call for "Delicious and Pure Honey"—while the people from the rising even unto the setting of the sun, may cry, "MORE! MORE! GIVE US MORE!"

It was moved that the President be requested to correspond with the bee-keepers of the country, to induce them to take more interest in Conventions, and to use every means within their power to create a home demand for honey; and as honey shows, once a year, in every State or District, would greatly assist in placing honey in its time-honored position as man's natural sweet, it is earnestly desired that such may be instituted, and our President is requested to give the Vice Presidents all the assistance he can to make such honey shows a success.

Mr. Newman thought that all correspondence should be conducted by the Corresponding Secretary.

Mr. Hasbrouck thought that the President would have more influence with the bee-keepers of the country.

L. C. Root was of the same opinion.

Mr. Newman said he had the interests of the apiary deeply at heart, and would not shrink from any duty assigned him. Carried.

READING OF CORRESPONDENCE.

A letter from the Rev. L. L. Langstroth, regretting his inability to be present. He would have met with a very hearty welcome.

Letters were also read from Mrs. Dunham, A. H. Hart, Wm. M. Kellogg, D. D. Palmer, R. M. Argo, J. M. Shuck, John H. Keippart, J. Whitman, Jr., and Gen. W. G. LeDuc, Commissioner of Agriculture, giving much valuable statistical information.

The following letter from Louisiana was then read:

Brother Bee-Keepers of the National Association:

As the Southern States will probably have little or no representation at your annual meeting, I beg to address you a few words in their behalf. The great distance, consequent heavy traveling expense, scant purses, and busy work of securing our fall honey crop, which comes to us in bountiful quantity just at this time, almost precludes the possibility of our bee-keepers taking an active part in your labors for the general good, but we feel a pride and a deep interest in your work, and hope that at some future day we will have the pleasure of assisting in your discussions of bee-keeping and honey marketing mysteries. We could not offer you any valuable advice or soothing consolation on the subject of wintering, nor could we reasonably hope to win the prize medal for section honey against your Doolittle, Betsinger, Hetherington, Martin and others, but coming to acres of nice yellow bees and tons of liquid nectar, we would ask your kind consideration. That all sections of our country may take a deeper interest in your efforts and proceedings and feel that it is really a national society, I would suggest that your membership might be largely increased, your treasury receipts brought up to a working basis, and your powers and influence for the general good greatly augmented, by appointing the meeting for a different place each year—say next year in Chicago, Cincinnati or St. Louis, the year following in New Orleans or Atlanta, the next in Baltimore, and so on. If such a plan should be adopted I feel sure our people in the South would lend a helping hand.

We have as yet very few well organized and efficient bee-keepers' societies in the South, but they are increasing gradually. The introduction of the Italian bee, the wonderful improvements in hives and apiarian implements, and the immense success of all who have engaged in the business, has attracted the attention of the whole country, and many are now buying bees and locating large apiaries as specialists. Many experienced apiarists are coming to us from the North and West, and with honey-yielding flowers in endless variety and profusion, blooming almost the year round; no expense of cellars, double hives and chaff packing, and no losses of bees from "wintering" and foul brood, who will say that we may not soon astonish the world with our honey productions?

Yet, with all these advantages, we have some drawbacks that cannot be speedily overcome without organized co-operation. The principal of these is the lack of a home market. Cane sugars and syrups are produced in such abundance, and at such cheap prices, and the people so much accustomed to their use, that there is no demand for honey in our villages, and very little in the large cities. Hence, we are compelled to ship our entire productions to the Northern or Western markets, or to Europe. For this we have cheap transportation by the Mississippi river and the cotton-ships at New Orleans. We have made no shipment direct to Europe yet, but it is probable that we will look in that direction in the future, as we meet no encouragement in the markets North or West. The cause of this we believe is mainly attributable to the inability of the leading honey dealers, or at least a majority of them, to distinguish between pure natural honey and the adulterated article. As proof of this, I have in the past three years sent several samples of choice machine extracted, pure white clover honey, taken from the hive by myself, to reliable parties in some of the Northern and Western markets to know what prices could be obtained, and the answer in nearly every instance was, that honey dealers and experts pronounced it a manufactured or adulterated article, entirely unfit for table use, almost impossible to sell and only worth the price of glucose for manufacturing purposes. This has been the experience of nearly all our bee-keepers and shippers of honey, and we cannot possibly account for it in any other way than that above stated. It may be possible that our flowers give us a very inferior honey compared to that usually sold in those markets, we might be reconciled to such an idea (possibly), but we cannot have much faith in the judgment of men who say it is adulterated.

In order that you may judge the matter for yourselves, I send, in the care of Mr. Thomas G. Newman, a sample of the same quality of honey referred to above, for the inspection of the Convention. No doubt you will find a marked difference between this and the white clover honey of the North and West, and if I may be allowed, I would suggest that for the benefit of bee-keepers and honey dealers generally, the Convention would call especial notice to this dissimilarity, which is attributable, as I suppose, to a difference in soil and climate. Honey from white clover blossoms in the South is not so light in color—more of a straw or light amber, more transparent, heavier in body, more delicate and smooth in flavor—than the white clover honey of the Northern and Western States, and a still more singular difference is, that while the latter will become solid and opaque by crystallization in a moderately cool temperature, the former retains a perfectly liquid and transparent state, even when subjected to cold several degrees below the freezing point. I have samples of this honey that I have kept exposed to light and the changes of climate several years, still it retains its original form. Mr. Chas. F. Muth, of Cincinnati, the leading honey dealer in the West, furnishes me with an instance where several barrels of this honey was left in the open air, on the sidewalk by his store, for many days and nights when the weather was extremely cold, the mercury reaching several degrees below zero, but on examination the honey was found to be still liquid.

Prof. Cook, in his late excellent work ("Manual of the Apiary") says: "Some honey, as that from the South, and some from California, seems to remain liquid indefinitely." As far as my experience extends, this is only true of honey taken from white clover blossoms, all other kinds crystallizing perfectly solid on the approach of freezing weather. Prof. Cook also says: "Some kinds of our own honey crystallize much more readily than others. But that granulation is a test that honey is pure is untrue."

In conclusion, gentlemen, permit me to express the hope that the Society may experience a pleasant and profitable meeting, and that you will endorse and actively assist the efforts now being made by some of our most intelligent bee-keepers, to get Congress to pass a law prohibiting the adulteration of honey and other sweets.

Very respectfully yours,
William H. Ware.
Bayou Goula P. O., Iberville Parish, La.,
October 1st, 1878.

Note.—The accompanying honey was perfectly capped to bottom of frame before being extracted, which makes it several shades darker than if taken before capped, as is usually done for exhibition purposes. It is not a selected sample, but was drawn from a tank of 160 gallons, so that it may faithfully represent an average of what we usually put up for market. W. H. W.

The samples of honey did not arrive, and it was subsequently learned that they were sent by mail and broken *en route*.

President Newman regretted this lack of regard for the rules of the post office. Carelessness in mailing queens had brought upon us the present stringent rules which were against the interests of bee-keepers.

Fertilization in Confinement.

If I could have my choice, I would postpone the discussion of this subject for another year at least, for the fact is, that owing, as I prefer to think, largely to the past unfavorable season in this locality, and to the unavoidable delays in experiments of this kind, I have not yet been able to put to the test some plans I have for so modifying my methods as to make them generally useful. My efforts have been directed mainly towards devising means for re-queening an apiary cheaply, and with stock whose character we could control. And what I have accomplished is adapted only, and perhaps not well, to this purpose. I have received so many inquiries on the subject, which I have put off with a promise to unbosom myself fully at this time, that I am constrained to tell what I have found out thus far, although I realize that the matter is still incomplete and might, perhaps, rather not be told.

In the first place, I have found out the main fact, that queens can be fertilized in confinement, and have satisfied myself that those who have stated for a number of years past that this was possible, did not probably observe incorrectly, and were stating the simple truth, although they have received a good deal of ridicule, and have even quite frequently been called hard names. It is a strange fact, that bee-men generally consider the thing so preposterous that they will not try to see whether it can be done or not, or if they try, do so in such a careless, indifferent way, that nothing comes of the experiment but the conclusion that they were fools for trying it. Men seem to think that there are some *a priori* reasons why the thing cannot be done, and finally, the distinguished author of the "New Manual of the Apiary" has attempted to formulate the reasons, thus: 1st. Because the mating must take place on the wing, as it is probably necessary that the air-sacs of the drones should be distended; and, 2d. Because the drones are cowards.

To the first it is only necessary to say, that nobody, as far as I know, has proposed to confine the sexes closely, that they could not fly; and to the 2d I answer, that I could never see much signs of cowardice in drones, except when the workers are chasing them with murderous intent, and then, having no weapons of defense, what could they do but run. At ordinary times, they seem to me to be a fearless, self-assured race, not hesitating even to venture into a strange hive, and investigating everything—even the lords of creation, without an appearance of timidity. There was once a man who went to Boston, and, as he leaned against a lamp-post, he expressed his views of the place thus: "I never before saw another such place as this. Everything appears to be reeling around and trying to stand on its head." Now, we know that these antics of the hub of the universe were "all in his eye," and so this question of the courage of drones may depend altogether upon the eyes of those who watch them. To me, at least, they appear to know no fear. If they are shut up, they quite naturally want to get out, but they don't seem to be much scared about it, and are not so intent on regaining their liberty as not to avail themselves of the great opportunity for which alone they live, and which they seem to be constantly seeking, if it is thrown into their way so that they cannot help but notice it. Now, beside these two reasons, which appear to me to amount to nothing, can any one think of another that would seem to make it more unlikely, that two bees would mate when put alone into a box, than that a pair of rabbits would under similar circumstances. There are several conditions to be observed, some of which are absolutely necessary to success, and others which hasten it.

1st. The queen must have been immediately before in contact with the bees of a hive, not necessarily loose on a comb, and must have left them of her own choice to seek a mate. She must be left entirely to follow her own inclinations and instinct, and I suppose the principal reason why parties who have tried to mate bees have failed, is, that they have opened a hive, picked out the queen, and tried to force her to serve their convenience.

2d. She must meet the drone in a small place—the nearer to a 3 in. cubical box the better, with glass on top only—standing in the bright sunlight. It is not impossible for them to mate in a green house, but if a queen and several drones should be released in such a place, they would be likely to strike the glass at considerable distances from each other, and each would stay near the place first struck, trying to get out, and so it would be quite improbable that they would come anywhere within notice of each other. The more contracted the place, yet leaving them room to fly a little, the more certainly and splendidly will they meet. I have used boxes with glass sides with success, but you are more apt to fail than if there is glass only on the top. They scarcely touch the top glass even with their heads, but fly just below it, in the seeming attitude of inspection of their surroundings, and do not become so excited and intent on getting out as when they fly against a vertical glass.

3d. She must not be exposed to the least daubing of honey. Daubing hinders her flight, and takes much of her attention in efforts to clean herself, and thus her time will be gone before she has attended to the business upon which she started.

4th. Preferably, but one drone and no bees must be put with her into the fertilizing box. The presence of more seems to irritate her, and she tries to get away from them.

I have found out, moreover, that there is not just one particular way in which queens may be fertilized in confinement, and no other. If the above conditions are observed the question is, how not to secure their fertilization if you shut them up in the same box, and give them a little time. I have seen various methods described, most of which I am sure would answer; but the objection to which generally is, that they are more troublesome than necessary. About a year after I had devised the method I employ, I read of a plan similar to it, in all essentials, published, in 1871, in *The Bee-Keepers' Journal and National Agriculturist*, but my way is rather more simple in details. I would remark here, that I think any plan in which the queen and drones are to be detained in a box, attached to the hive, through a 5-32 inch passage, is not to be trusted; for I have proved to my satisfaction, that a virgin queen will pass through as narrow an opening as a worker can.

The method I use is as follows: I have my queens hatched in queen nursery cages, not put down into the hive as they usually are, but set into a rack on top of the frames. The cages have coarse wire cloth bottoms, and glass tops. I can set about 36 on the 8 frames of a hive. As I use side surplus boxes, this does not interfere with honey gathering. Into these I put the cells as near matured as I can get them with safety. I supply them, on a small wire cloth shelf with a little honey in the comb, nicely cleaned by bees. I cover all with a woolen blanket and watch them quite closely through the glass covers to see when the queens hatch. When a queen is 4 days old, about 1 p.m., on a fine day, I take a fertilizing box with a glass top large enough to cover one-sixth of the cages on the hive, and 3 inches deep, and opening a slide in the bottom, I place it before the entrance of a hive containing my fine drones. I slide the glass top a little to let the workers out, and wait till I have caught a drone that suits me. I now shut the top, remove the box, and place it over the cages on the queen-rearing hive, taking off the blanket and removing the glass cover from the cage whose queen I wish to fertilize, so she can walk up into the fertilizing box when she chooses. I can set 6 such boxes over the cages, each charged with a drone. I now take my hoe and go to hoeing corn somewhere near, occasionally going to look how things go on. If I find a drone dead in any of the boxes and the queen bearing evidences of the success of the operation, I remove her, put in another drone, and open another cage. If a queen does not come up in a half hour or so, I conclude she is not anxious, and shut her up to try another time. If I have good luck I can get through with a dozen in an afternoon, and with all in three days. But I have never done quite so well as that. Ordinarily, it takes 5 or 6 days to get the most of a batch fertilized, and there will be some that seem to get started wrong, and they have to be put back several times, and finally starve to death before they are fertilized, or get too old to care about it longer, and have to be thrown away at last. Two or three times, when I have felt real lazy and had not much to do, I have sat down and watched the process, but one requires a good deal of patience to do it. It is as bad as fishing. First, the queen sits down on the side of the box and rubs herself indefinitely. She has a little honey on her likely. Finally, she begins to get clean and she takes a fly up toward the glass. Just then the drone is exploring the bottom of the box, or has gone down into the cage and stays provokingly. By and by the queen gets tired of flying, and settles on the bottom and rubs herself again. Now the drone comes up, he crawls around the bottom of the box, not deigning to notice the queen. Then he stands still, and *she* begins to tramp in a very excited manner; but she seems to ignore the presence of the drone, and he hers. But stop! there, she has found him. She caresses him, walks over him back and forth, pushes him around and pushes herself under him, and you are all awake, thinking the critical moment has come; but there the unfeeling brute stands, perfectly stupid and impassive, and you feel like taking him out and pinching his head. By-and-by, he gets up and flies to the glass for a little exercise, for variety. Now the queen is at the bottom, still further smoothing her exterior. You are disgusted, and conclude you will go and take a drink—of water, of course. After a while you walk leisurely back and there, as sure as fate, lies the drone on the bottom dead, and the queen is running about wriggling and rubbing herself with the well-known appendage attached, and the affair is over. You probably call yourself a fool, and resolve that the next time "you'll be in at the death."

You fix things again and watch, with a repetition of former experiences, till, all at once, you notice in one of the boxes a queen and a drone flying at the same time, now, again, you are all eagerness; but the drone persists in flying toward one corner, till he is tired and settles. The queen continues flying a while longer and she settles, just as the drone is ready to rise again. So the thing goes on till you begin to think that it was all a matter of chance before, and you don't believe it would happen again in a month, when all at once they are both up near the glass again. They turn toward each other an instant—there is a great commotion. They go dashing against the top and the sides and the bottom of the box, around and around—you can't see them—you can only hear— till suddenly the drone lies dead, and the queen is running uneasily around, and the thing is accomplished. It all took place before your eyes, but you saw nothing. You cannot tell who began it, nor anything of the position, nor how the queen tore herself loose. I've seen the operation twice in a box, and once on a window, but can answer none of these questions.

You will undoubtedly ask me if I consider the plan perfectly practicable and satisfactory. Well, sometimes I do, and sometimes I don't. Last fall I had such excellent success with it, that I thought it left nothing to be desired; but during *this* execrable season I have had so much trouble and annoyance and loss with it, that at one time I had concluded to abandon it entirely, and go back to nuclei for raising queens, and to try and perfect some method of fertilization, if possible, in connection with them. But after suffering *more* trouble and annoyance and loss *with the nuclei*, I concluded to try my cages once more, and lately have had good success with them with Cyprian queens.

You ask, What is the trouble? It begins here. You have a lot of cells 9 days old. You wish to let them get as old as possible before putting them into the cages, and you conclude you will risk them a couple of days yet, keeping a strict watch over them in the meantime. Have you not noticed that such a state of things was sure to bring on a cold rain storm this summer, a week long, so that you could not get into a hive even with an umbrella? And, of course, when the rain clears off one queen has hatched and all the other cells have a neat little hole in the side, and your great expectations have vanished. You start a lot more from larva all hatched the same day, so the queens will come out all about the same time, and you double and quadruple the number, and start them in succession so that if you lose most, *some*, at least, will come out between storms—it can't rain *all* the time, even this summer—and at last you have a supply of cells for your cages. Now the young queens are all hatched and just old enough for you to begin to get them fertilized. This is another condition of affairs which this year has brought rain as certainly as 4th of July used to do, when we were boys. It rains and rains for 3 or 4 days, then it stops, and is overcast for a couple of days more, then another storm commences. and before you get sun-light to bring your queens out, they are all starved in the cages, or the few remnants are too old to operate upon sucessfully. This thing has happened with me over and over again the past season.

Then, again. the queens are difficult to be introduced. Within half an hour after they are fertilized they may be taken out and suffered to run into the entrance of any queenless hive with perfect safety; but if you cage them again, and keep them beyond this time, it is almost impossible to introduce them in any way that I know of. They seem to be worse than virgins. I have introduced virgin queens from the Jewell Davis nursery cages, by the Mitchell plan, to nuclei, without a loss of more than 3 out of 12; but by the same plan of introducing, I have, every time this summer that I have tried, lost more than half, and out of one batch every one. I would not suspect this difficulty, but it is a fact. Consequently, it will not pay to raise dollar queens by this process, as far as I understand it at present. If you must introduce the queens, at a great risk of loss, to nuclei to get them laying before they are salable, better raise them in the nucleus from the first. If it had not been for this unfortunate difficulty, I say, frankly, I should not have told what I have about it, and I should have made a sensation in cheap queens.

As much as I know about queens fertilized in confinement, I have told. I, of course, expect that there will still be those who will say it can't be done, and never has been, but if I shall have succeeded in stimulating any to work with me in this field, until we can solve to the satisfaction of ourselves and others this most neglected and most important of all problems to the bee-fancier —now doubly important since the arrival of the Cyprians—I shall feel repaid for my efforts, and the opprobious epithets which have silenced others, and which I suppose I have reason to expect from some of our not very enterprising contemporaries, will not hurt my feeings. J. HASBROUCK.

Flat Brook, N. J.

Mr. Oatman asked what Mr. Hasbrouck expected to gain from this, and he replied that it enabled him to keep different races in the same apiary distinct, or cross-breed, as he may desire, and he had hoped thereby to cheapen the rearing of queens. He is satisfied that by other means practiced one cannot afford to rear queens for a dollar. The great difficulty in introducing queens so fertilized, except within half an hour after the act, is a drawback to its general use.

Mr. Nellis had nothing to state except the failure of his experiments.

Mr. Oatman. This is a serious and important question, if cross-breeding can increase the production of our bees. He moved a vote of thanks to Prof. Hasbrouck for his able address, with the request that he continue the investigation of the subject.

L. C. Root. This is a matter of more importance than generally considered. We aim to rear our queens from our best colonies, and therefore we should be most particular in selecting the mother as well as the drone. We have no control of this in the natural way. I have experimented largely, but never met with success, and am looking anxiously to have this a success, as it is of great importance.

Mr. Alley will try the method as soon as he reaches home.

Nr. Newman thinks it important, and next to the production and marketing of honey.

Mr. Root has noticed some colonies having very superior drones, and has earnestly wished that his queens might be fertilized by such drones.

Mr. Hasbrouck does not know that he is giving too much importance to the subject, but is surprised that more have not succeeded.

Mr. Oatman. Will a queen hatched in a hive have any disadvantage over a queen hatched in a cage?

Mr. Hasbrouck. None; I only hatch in a cage for convenience to save time in looking for them.

Mr. Root further stated his experience while with the late Mr. Quinby. Gave Mrs. Tupper $10.00 for her method and failed. First he made a box, then a house eight feet square. Placed a nucleus in the house containing only young worker bees. Once saw the drones appearing to notice the queen. I should expect if I caught a virgin queen leaving the hive that would be the most opportune moment for the experiment and I hope our members will experiment.

Bee Pasturage.

There are many important questions related to the topic with which your committee honored me, in making their assignments for essays to be read at this annual gathering. The fact that all our honey is gathered in a few brief weeks of a long season, is a suggestive one. The fact that the quality of honey, both as to appearance and flavor, is as varied as the plants from which it is gathered, must interest the practical bee-keeper. That many honey-plants are very susceptible to external circumstances, ever varying in the amount of their secretions with climatic and other conditions, as also that there is great variation among different plants, in the degree of this sensitiveness, are questions of great interest to the thinking apiarist. The fact that bees are also wonderfully susceptible to exterior circumstances, and only do their best at times of general prosperity, is also of interest in this connection.

Much of interest and value connected with these questions, is now the common property of all intelligent patrons of our art. Much more is yet hidden from our view, waiting to be drawn forth from its seclusion by the keen instruments of the scientist, or to be discovered to the world by the sharp vision of the observing bee-keeper.

I deeply regret that I am not able to throw more light upon this important subject; yet I shall not be wholly dissatisfied if I can even let fall a single faint gleam, either by way of actual information, or of suggestion that perchance may lead to wider knowledge.

LONGER AND MORE CONTINUOUS HONEY SEASON.

It is well known to all present, that even in the most favored localities, the aggregate time of active storing, during the best seasons, is hardly twelve weeks—one in May, fruit blossoms; four in June, white clover and raspberries; two in July, basswood; and five in August and September, golden rod, boneset, etc. For most seasons and localities, the above is twice too great. Now this time—were there but flowers to attract the bees from the time of the early willow and maple till the autumn frosts—might be more than doubled. The question, then, of replacing these periods of dearth and idleness—I might say of robbing and irritableness—with those of bloom and industry, becomes one of no small moment. You all know, by the fruitful observation of the past, that could you replace idleness with activity, it would be more than a net gain, as it is no injury to the bees; in fact, our bees never come through the season in such good condition as when the time of secretion is longest and most continuous. Can we then, by any means, secure a continuous pasturage for our bees? This would seem the most difficult in April and May. Yet, who has failed to notice the gay, coquettish dandelions, and their success in winning bee-suitors, even at this dawn of the season? Might we not, then, secure a golden, if not a "gold basis," by planting an acre of these sprightly gems of the early year? From the attention which the bees pay these flowers, as also from the family to which they belong—Compositæ—we should be led to rank them high as honey plants, till actual experience proves the reverse. It was suggested in a recent number of one of our bee-journals that the roots of these plants might be utilized, as, when properly prepared, they furnished a not unpalatable substitute for coffee, though I must confess to a personal prejudice in favor of No. 1 Java.

The time of dearth between white clover and basswood can be canceled by constantly cutting back the white clover. Our College lawns were mown, the past season, once in every three days. This kept the white clover in bloom, and made the harvest from this source lap on to that of basswood. Or we may secure bloom from any of the following plants: Rape, mustard, mignonette or motherwort. Rape and white mustard, on light soil, with good cultivation, will bloom in about four weeks from sowing; black mustard, about eight weeks. Mignonette, if sown early, will be in bloom before the white clover is gone, and continue through the season. Motherwort, in this latitude, will fairly hum with bees from June 25th to July 20th. Which of the above plants can be grown with the greatest profit? is a question which experience alone will answer.

To bridge the chasm between basswood and fall bloom, or to supply the absence of native fall flowers, we have rape and mustards—which can be made to bloom at will after the middle of June; mignonette, motherwort—whose bloom I think could be deferred by cutting in May; catnip, which commences to bloom early in July, and is covered with bees for about two months; cleome, which blooms from July to September, and in favorable weather is alive with bees; and borage. From reports in the bee journals, I presume I might add figwort to the above list. Surely the above is, by no means, a discouraging array. I wish I could state the acreage of each of the above, which would suffice to keep fifty or one hundred colonies busy, as the season's average; but I know of no accurate data from which to form an opinion. My friend, Mr. Fisk Bangs, from an experiment with three acres of black mustard the past season, feels sure that this amount will keep eighty colonies fully active. May I not suggest that each of you who has or can command a few acres of land, make one definite experiment each year, and report the results at these annual gatherings. Who can tell what practical results might flow from such a course? From our experiments here, I am assured that we may augment our profits by securing a continuous pasturage as suggested above. Which plants are most desirable for honey, and for added profits in market value of seed, I am not able to state.

QUALITY OF HONEY.

Every person here has admired the immaculate honey secured from the white clover and basswood. Most of you have tested its excellence with even more pleasure. All have observed the less inviting appearance of buckwheat honey; most have regarded the flavor of this with less favor. Many of us have noted the rich brown color of honey gathered from the bonesets and golden rods, and have spoken its praise as we tested its incomparable excellence. We know from its European reputation, that rape honey is beautiful and of exquisite flavor. Mr. Fisk Bangs, the past season, has proved the same to be true of that from mustard. The color is a rich golden yellow, the taste delicious. The honey from mignonette, cleome, teasel and the mints, has been commended for its fine quality and beautiful appearance. Yet, notwithstanding all this, we still have much to learn of the real character, physical and chemical, of the various kinds of nectar. Nor will any one question the practical character of this knowledge, who has carried his light and dark honey to market, exhibiting the same to the buyer, side by side.

Prof. R. F. Kedzie, of the chemical department of this College, is now making analyses of all the kinds of honey that he can obtain, that are purely from the flowers of a single species of plants. May I not ask each of you, whenever you have any honey that you *know* to be from the flowers of a certain plant, that you note the color, the flavor, and ask others to test the same with you, that error from the personal equation—so to speak—may be removed, and then send a generous sample to Prof. Kedzie for analysis. The honey may be sent by mail, safely and cheaply, if prepared as follows: Bore an inch hole into the edge of a thoroughly seasoned two-inch plank, to a depth of four inches. Then trim off with a saw till the piece is about two inches square and five inches long. Now fill with honey, tightly plug, and write on the wood, "Prof. R. F. Kedzie, Lansing, Mich.," adding five or six cents postage, as the postmaster shall direct, when it is ready to mail. At the same time send a postal which shall inform Prof. Kedzie who you are, your address, the kind of honey, also whether the flowers grew on sand or clay, on high land or low, whether the season was wet or dry when the honey was gathered, and whether the yield was abundant or light. Are not some of you ready to do this at once? Such a course, generally adopted, will give us very valuable knowledge in a direction new, yet very practical.

HONEY PLANTS CAPRICIOUS.

That plants have moods, no observing apiarist can doubt. Let the weather be very wet, and secretion of nectar stops. It is the same if the weather is very dry. We have all observed that, some seasons, the nectar of white clover, basswood and buckwheat would fairly flood the hives. Yet, the next season, though the flowers were no less abundant, the nectar was almost wanting.

Flowers, also, like people, seem to vary in their power to fortify against adversity. We have noticed that the mustards, borage, catnip. and especially motherwort, seem ever ready to yield their precious sweets, while most plants are alike susceptible to moisture or drouth, and at times of these extremes, utterly refuse to yield their usual gifts of the coveted nectar. Some plants, too, like borage, seem not to be favorites, and only attract the bees, in numbers, when other plants refuse to secrete. The past season we have tried a number of plants from Bohemia, and other parts of Austria and Southeastern Europe, some of which came recommended very highly as honey plants. But, to our surprise, none have proved successful. Can it be possible that plants become home-sick, or rather, that in being acclimated their constitutions become so disturbed that they are unable to distill the precious sweets. At least I do not think a single season's results a crucial test, and shall certainly give them a second trial.

How desirable that careful experiment shall discover to us the law which governs nectar secretion, as also the flowers or plants which are most indifferent to varied conditions of atmosphere, and thus most desirable for bee forage.

THE INDUSTRY AND THRIFT OF THE BEES COMMENSURABLE WITH PERSISTENCY OF HONEY SECRETION OR BEE FORAGE.

I have been led by my experience for the past three years, to attach no little importance to this last division of our subject. I have noticed that even our small beds, occupying but a few square rods, served the purpose of stimulative feeding, thus keeping the bees breeding during the usual interims, not only of storing, but of rapid brood-rearing as well. This continuous breeding keeps the hives crowded with bees, and ready to take the fullest advantage of the brief harvest, when the honey seems to come in floods. Our experiments here, for three successive seasons, some years since, as given in the AMERICAN BEE JOURNAL, showed conclusively that stimulative feeding, during the periods of summer when the bees were inactive, was very remunerative and desirable. I now believe that the cheapest and best method to practice this, is to plant a few square rods with well selected honey-plants. Each bee-keeper, by studying his locality, may soon learn the periods when no nectar is to be expected, and so arrange that a plat of rape, mustard, catnip, motherwort, mignonette or cleome, shall open their showy petals, and offer their tempting nectar. In this way even small beds of our most choice honey plants will not only add to the beauty and interest of the apiary grounds, but will also swell the profits of the apiary. This is a cheap and agreeable way to practice stimulative feeding.

Regretting that I cannot join in your social greetings, and profit by the able discussions and valuable exchange of opinions, which I am sure will characterize your gathering, I sincerely hope and trust that the harmony and entire freedom from aspersions which shall attend your proceedings, and the great value of your deliberations, will convince even the most skeptical, that association among apiarists, as among all other classes, means progress. A. J. COOK.

Agricultural College, Lansing, Mich.

A vote of thanks was unanimously passed to Prof. Cook for his very able paper on Bee Pasturage.

Rational System of Wintering Bees.

Fellow Bee-Keepers of the National Convention :

How to successfully and profitably winter bees, seems still to be the puzzing problem with many of our apiarists, and as the season is now rapidly approaching when our little, busy pets are housed for a number of months, it becomes us to adopt the best system possible so as to secure their health and comfort.

This subject engaged my attention for a number of years, as year after year a number of colonies were lost, and some apiaries entirely depopulated.

Other domesticated stock can be wintered without loss, and why cannot bees be wintered in an economical way with the same degree of safety and certainty ?

I have wintered in many different ways, but when brought to the severe test of a long and cold winter, all have proven unsatisfactory except one, which I first commenced experimenting with in the winter of 1870-71, and perfected in the fall of 1873, and I am now persuaded this is the only correct and rational system, as it secures protection against cold, and imperceptibly passes off the moisture exhaled by the bees, and also guards against the sudden changes of temperature. Unless these three things are provided for, the bees must suffer.

Upward ventilation, whilst it passes off moisture, if direct, will also permit all the warmth that is generated by the clustered bees to escape.

Warmth being absolutely necessary for their existence as well as comfort, hence, if this passes away too rapidly, a much larger consumption of honey ensues to generate an extra supply of warmth. It also causes an unnatural degree of activity of the colony, which is very objectionable in cold weather. As the warm air escapes, the bees suffer cold, and from the excessive amount of food consumed, undue activity and exposure to a continually changing temperature, disease and death follow. (By referring to my journal, I find that in the winter of 1872-73 I lost all my colonies having direct upward ventilation, while those properly cared for had no trace of sickness.)

If no upward ventilation is provided, the moisture exhaled by the bees condenses and forms ice on the walls and top of the hive, making their home very uncomfortable in cold weather, and as soon as the weather moderates sufficiently, the ice above and at the sides melts, causing wet and damp combs to say the least. In many cases the water comes in direct contact with the combs occupied by the cluster. When this occurs, and the temperature lowers suddenly—as it often does in mid-winter—the colony is lost.

It is true, bees can be wintered in a good dark cellar specially prepared to receive them, but not every bee-keeper is thus situated. But look at those bees when taken out in the spring, and how many mouldy combs and debilitated bees do you find ? After such colonies are placed on the summer stands in the apiary, perhaps for a fortnight, they do not contain over one-half their numbers when taken from the cellar, and why ? Because the bees being unnaturally confined, living in an impure atmosphere, under-ground, have not sufficient vitality, and when they fly away from their hives they cannot return. This is what is generally termed "spring dwindling."

Bees in plain box hives, whether movable comb or not, sometimes winter on the summer stand if left alone without any care ; but this is only an exception, and not the rule, for if those same colonies had the proper protection, they would have consumed much less nutriment, and contain more bees and brood at the opening of spring ; and during winter, when cold and piercing storms are raging, the apiarist who properly winters his pets, can sit in his comfortable room and feel happy and contented, knowing that his bees are also comfortable and enjoying their long winter rest.

The condition of the colony in the fall has a great deal to do with successful wintering. A colony, to winter well and be ready for early spring work must contain—First, a goodly number of workers ; second, a healthy, prolific queen ; third, abundance of honey and pollen stored in clean comb. Thirty to forty pounds of honey is not detrimental, although twenty-five will do—more is an advantage in this latitude. I never found a single colony suffer from too much honey, if properly handled—many good and much-respected authorities to the contrary do not alter the fact. I am satisfied that where one colony suffers from too much honey, ten thousand suffer from not having enough. I never saw a colony on the first of October that had not some empty comb or comb with brood. If honey is plenty, then empty or brood cells are in the lower front corners of the combs, just where they should be, and until extreme cold weather sets in, which in this locality—south-western Pennsylvania—usually occurs the latter part of November, enough honey is consumed to give plenty room for the swarm to cluster. I am now speaking of colonies having good laying queens, my experience since 1863 having been with Italians.

Bees can also cluster on sealed honeycombs and not suffer. Here I am again on forbidden ground. But I array facts against theory, for I have often found in my observations, when the mercury was visiting in the vicinity of zero, bees nicely clustered against their warm woolen quilts, although all seven frames were filled and sealed for at least 4 to 6 inches from the top-bar of frame downward, the rear ends of the frames generally being full of honey. This can only be done when the warmth is retained so that the combs can be kept warm by the bees. This, however, cannot be done by a single wall hive, or in any hive having a honey-board, although it may have a dozen inch-holes, as moisture will condense, and warmth escape too rapidly.

Another point that must not be overlooked is the number and shape of combs. To try to winter with ten or eleven frames is an error. More than seven frames are positively injurious—for medium colonies, five frames are enough. Bees cannot move from one side of the brood-chamber to the other, on to new combs, in cold weather, without chilling, and this is why many colonies are reduced or altogether lost in hives having a large number of frames. By using a comb about 10 inches deep and 18 inches from front to rear, the honey is always above and rearward of the bees, and as the honey nearest the swarm is consumed, the bees can easily follow for fresh supplies, without changing combs.

To fully secure the bees against cold and the sudden changes of temperature, and to insensibly pass off the moisture exhaled by the bees, I have made the Combination Movable-Comb Bee-House, which in winter consists of the brood-chamber and the outer case or house. A dead-air space of 4 inches being all around between the brood-chamber and inside walls of the house, and a space 7 inches from top-bar of frames to upper edge of outer case or house. The frames have open tops and closed ends, being 13 inches deep and 19 inches from front to rear, outside. Seven frames form the brood-chamber. About 3 inches below the top bar, several passage holes are made about one half inch in diameter, for the bees to pass back and forth, and to equalize the warmth of the colony. Across the top-bars of the frames, several strips of wood, one half inch square, are laid, and over the whole—as a cover of hive or brood-nest—a woolen quilt is spread, being 6 to 8 inches larger each way than the top of brood-chamber.

The space of 4 inches between the sides of brood-chamber and house is well packed with wheat chaff, or cut straw, if chaff cannot be had, and on top of quilt the space of 7 inches is also filled with same material, when the roof is put on, which has a ventilator at each end to give free circulation of air. This keeps the bees perfectly warm and dry.

The brood-chamber entrance is so adjusted as to come near the right hand corner, while the portico entrance is moved to the left hand, thus no direct blast of air can strike the hive entrance, neither is there any danger of the entrance closing with ice as it is always protected, and comparatively dark.

For in-doors, I simply place the brood-chamber several feet above the floor of the cellar, covering the frames with a warm woolen quilt, and contract the entrance to one-half inch in width. This keeps the bees dry and warm, the moisture passing off through the quilt, whilst the warmth is retained. Several times during winter, on warm days, they are set out for a fly.

With this system I have now wintered my bees for 5 seasons and not lost a single colony, which fact assures me that my system is correct.

Hoping that my fellow bee-keepers may be benefited by my experience and observations, is the desire of your obedient servant. H. H. FLICK.

Mayfield Apiary, Lavansville, Pa.

Mr. Oatman had known bees put into winter quarters, with a honey board fastened down with propolis, come out equally as well as others covered with quilts.

Mr. Betsinger was glad that others were accepting his theory, that bees would winter well on combs of solid honey.

Mr. Porter had good success with bees packed on summer stands, but when left packed in summer they did not do well.

Mr. Wenzel intended to put a movable jacket about his hives and pack them full of buchwheat chaff.

Mr. Nellis thought that not enough attention was paid to protecting bees early.

Mr. Watson suggested rice hulls as a good materiel for packing.

Mr. King said if chaff is used for packing, it ought to be confined in some way so that it cannot be littered around.

Prof. Hasbrouck recommended contracting the brood-nest and covering with woolen blankets as the simplest and best method of wintering.

Mr. Porter preferred chaff on account of cheapness.

Mr. Oatman had experience with wrapping with woolen and different materials, and found old carpets the poorest thing used.

Mr. Everett described a method of wintering by constructing a frame around several hives together and filling it with straw.

L. C. Root gave his ideas about wintering. He was opposed to much packing, and preferred buckwheat chaff when it was done. Warmth was desirable, because it produces a dry atmosphere inside the hive and this was necessary for the health of bees. He advocated unpainted hives, as they allow moisture to escape. He had noticed when bees were dry they deposited dry fæces on the bottom board. In-door wintering under imperfect conditions was not so good as outdoor with proper conditions. He said that Capt. Hetherington spends much money in wintering, and not always with best results, while a clodhopper near him would winter without ever losing a colony in old gums with cracks in sides and top, on summer stands and without care.

Our Honey Markets.

By the inventions of the movable-comb bee-hive, the honey extractor, comb foundation. and the consequent better knowledge of the nature of bees, the annual productions of honey have increased to almost incredulous proportions. Ten or twelve years back, an average crop of 15 lbs. of honey per hive would be considered a good yield per season, while to-day an average crop of 150 lbs. per hive is thought nothing extraordinary in a well-regulated apiary. Besides this great difference in quantity, those 15 lbs. of old would be marketed in promiscuous shapes. Boxes of any kind would answer for honey—neither producer nor consumer was particular.

Of late, however, matters have changed. Not only is the best and neatest style required for marketing honey, but it is also essential that each kind of honey be kept separate, otherwise the lowest rates will have to be accepted for all.

Taste is cultivated for different kinds of honey throughout the country. While some will pay the highest price for clover, others will prefer the linn or basswood, poplar, buckwheat, sage, sourwood, or any other kind of honey. For manufacturing purposes, also, different kinds are preferred; bakers preferring buckwheat and poplar honey. Compounders of liquors and manufacturers of wine, linn or basswood; tobacconists, clover honey, etc. Every sensible bee-keeper, therefore, will find it to his advantage to comply with the requirements of the market.

Producer and dealer should unite in offering honey to the consumer in the most attractive style.

Extracted honey is, perhaps, most acceptable to the retail trade in neat glass jars, neatly labeled, holding ½ lb., 1 lb., 2 lbs. and 3 lbs. of honey. A dozen or two of these jars, put up in a neat case, facilitates the jobbing trade. For druggists, confectioners, etc., desiring larger lots, tin buckets holding 5 lbs., 10 lbs. and 25 lbs., are more suitable.

One requisite to a healthy honey business is the neat outside appearance of packages, and the other, and perhaps the most important, is that our customers are convinced of the purity of our honey.

There is hardly a business in which adulteration is not practiced. We cannot, therefore, well expect that the honey business alone should make an exception. And we find, indeed, an abundance of adulterated honey in the market. It is the stumbling-block to a rapid growth of honey consumption.

In former years, when honey was higher priced, sugar syrup furnished the principal means of adulteration. At present, however, glucose, or so-called grape sugar, has been substituted. Glucose, the sugar of starch, is manufactured in our country of corn, in Germany and France of potatoes principally. This liquid is a dull sweet, of the same thickness and color as honey; unwholesome, but cheap, and not, by far, as sweet as cane sugar. Being without a flavor, it partakes very readily of any flavor brought in contact with it. For instance, five or six parts of glucose and one part of clover honey, mixed up, gives the whole the flavor of clover honey, or of linn honey, if linn be mixed with the glucose. The worst of the matter is, that it takes an expert to detect the fraud. This mixture appears to be complete in regard to flavor, but is minus the acid imparted to all sweets passing through the honey-sack of the bee, and which gives that tickling sensation to our throat. A number of stores in our city are provided with that spurious article. I have seen glass jars containing a piece of comb-honey each, and glucose only filling the remainder of the jars. The glucose had taken the flavor of the comb-honey, and the jars sold largely as "Choice Clover Honey," which their neat labels indicated. The only discovery made by consumers generally was, that they could not tell why they did not like honey any more, when they remembered well they had been fond of it in former years.

The price of glucose is 3½ to 5½c. per lb., and affords quite a temptation to the unscrupulous. Dealers, principally, were guilty of adulteration, but of late, producers also have tried their hand at it, perhaps stimulated to cheat although indirectly, by some of our bee publications recommending the use of glucose for feeding purposes. I was offered two barrels of honey, within the last month, by one of our bee-keepers, which I am certain was glucose, the larger part of it. This sweet is found in our market under different shapes and names. Corn syrup. for instance, is one of them. Being very susceptible of flavor, the most pleasant flavor is given it. It sells well, but not often to one party, as one soon gets tired of it. Other parties, however, take his place. So much for living in a large country. Another kind of glucose is maple syrup; seven-eighths or more of all sold is glucose.

As bee-keepers, we don't care how much honey-syrup is sold, but glucose honey is very detrimental to our welfare, especially so if the glucose part of the name is left off, and the article forced on the market under the name of "Pure Honey."

I have been thus particular in describing adulteration, because I wish to put on their guard honest producers and fair dealers. That the public be assured of the purity of our produce is of vital interest to the bee-keeper and honey dealer.

In regard to comb-honey, it is of importance to the bee-keeper, first and above all, to produce a choice article in good shape. Choice comb-honey is white and well capped. Small frames of light, clear lumber, 5 to 6 inches square, and 1½ to 2 inches wide, filled with nice, white comb-honey, well finished, and weighing 1½ to 2½ lbs. each, is perhaps the most suitable shape with which to meet the retail demand. Neat shipping cases, holding 50 or 60 lbs. of the above frames of honey, will accommodate the jobbing business. Shipping-cases should be cheap, neat, but strong enough to stand transportation, and the contents should be shown through glass on two sides to as much advantage as possible. When placing them in our stores, the honey should be shown without exposing it to the dust, dirt and flies.

Neat glass-boxes, filled with nice. white comb-honey, looks well; but the most popular shape is, undoubtetly, a frame, as described above, without any glass. Purchases of honey look so much at their own interest in close times like the present, that they are loth to pay for any more tare than necessary. The price of honey, like that of other produce, will be regulated by the laws of supply and demand, just as soon as consumers commence to be better judges of the quality; when honey will also, cease to be merely an article of luxury.

Granulated honey, which is apparently so much objected to by the uninitiated, and is a source of trouble to dealers, will then be the preferred article, which it has been for years in the Old World. Perhaps nothing is a better proof of the purity of honey than a solid granulation. CHAS. F. MUTH.

Cincinnati, O., August 10, 1878.

L. C. Root. I think this one of the most important subjects before the meeting. We must not only watch the dealers, but see that the producer is free from any practice that might injure the business. On this score I object to the use of foundation in the boxes. The adulteration of honey by the use of glucose is a very serious one to the honest producer and the prosperity of the business. Some think that honey in the comb, as well as the extracted, is tampered with, and sales are very much affected. This should be corrected, as a large and growing interest ought not to be allowed to suffer from the dishonesty of a few unprincipled men. Sixty pound crates I consider too large; twenty pounds makes the best package for handling. Frames without glass I think lessen the sale. Grocers who have dealt in them are opposed to them as being troublesome to handle and not a practical form for the general puclic.

AFTERNOON SESSION.

Mr. Shearer. Two years ago I killed nearly all my bees by experimenting with feeding glucose. I fed them as much as they wanted to eat about the middle of April, and I continued to feed them, but they did not develop satisfactorily; they continued to dwindle until I had but eight colonies by doubling. I determined to follow up this, and later put the eight into two, and lost them. This had a bitter taste and may not have been as good as some made now. Certain poisons in small doses have a stimulating effect, and in large quantities are poisonous. I have never experimented since, but I am satisfied that all who have tested can detect these poisons. The question is, are we not ruining our trade if we admit any use at all of glucose. We may not be able to stop its use, but we can make it a penal offense to sell it for honey. Let each article be sold under its own name.

Mr. Porter. There is a difference in the quality of grape sugar. If we can have a wholesome food for wintering bees it will be used. An article free from sulphuric acid, which seems to be the chief objection. I would so experiment with that it will not be stored, and mark the result.

Mr. Bacon has lately examined specimens of grape sugar and glucose. Grape sugar is hard; glucose soft, peculiar in taste, and has not the same body as honey, and by adding it to honey it may deceive. It varies in price, according to quality, from five to two and one-half cents. This material will throw us out of the market. It is an inferior material. not honey, and should not be so called. Druggists need the purest honey for their prescriptions, and the use of another substance vitiates the prescription and it is a gross imposition upon the public.

Mr. A. E. Manum, of Vermont, sold his extracted honey to a druggist in Troy, who used it in the manufacture of a patent medicine, paying him much higher than the market price because he knew of the adulteration after leaving the producer, and feared its use in his goods.

Other members gave similar testimony.

Dr. Trimble said we must be careful of reputation, otherwise sales could not be kept up, and gave a statement of adulterations in butter and how shamelessly some rich men had lent themselves to frauds in articles of food.

Mr. Newman. It is essential to know what we are eating, whether honey, butter or anything else, and the AMERICAN BEE JOURNAL, as well as the *Bee Keepers' Magazine*, will uphold honest dealing and denounce adulteration.

Mr. Shearer stated that in this country 97,000,000 bushels of grain are used yearly to make spirits. By the use of strychnine, stramonium, poppy-juice and belladonna, the gain in quantity produced was very great, viz.: from 3 to 16 gallons. This is done for profit; men know it, yet they will drink it. We cannot PREVENT the sale of glucose, but we must protect the people from the adulteration of honey. There is sufficient acid in the best glucose to kill bees. The adulteration of syrups is very extensive.

Mr. Porter. Our laws against adulteration should be as strict, and as strictly enforced, as those of England.

Mr. King. I have bought both the imported and the home-made grape sugar, and could never eat a piece the size of my thumb-nail without vomiting. Mr. Bergh's law is broad enough to prevent the needless taking of life, and I intend to make this a test case, and see if our pets cannot be protected. In Kentucky there is a law to prevent adulterations. On this question we all stand on the same ground.

Mr. Bacon had killed bees in days of ignorance, but will do so no longer. He produced specimens of glucose and grape sugar, which were passed around and tasted. If what is fed in the fall is not wholly consumed in the winter, it will become mixed with the honey the following year. One factory in Buffalo converts 5,000 bushels of corn a day into glucose. Its manufacture was described. The adulteration of honey is very small as compared with the amount of the crop, and need not excite any fear whatever on the part of the consumer, but we desire earnestly to nip this in its infancy, before it reaches the alarming extent of the various syrups.

Mr. Hasbrouck. If pure glucose is not deleterious, some of the chemicals may sometimes remain. The trouble does not come from sulphuric acid, but from sulphate of iron, which is not fully removed, and Mr. Shearer's bees probably got some of this. Glucose, fine and better than what has been passed around, is a great temptation. Honey will not act as glucose does when treated with proof alcohol. With glucose a precipitate is thrown down; none with honey, which simply appears of less consistency.

Comb Foundation.

N. N. Betsinger. Many, no doubt, think enough has been said upon this subject to prove that comb foundation has become a success. But I say unto you of a truth, like the Queen of Sheba, "the half has not been told." Without any selfish motive or prejudice upon this subject, I give you my experience for the past two years with comb foundation. The first was purchased from a party whom I have every reason to believe made it from pure wax. It was placed in different forms in several hives, all of which was accepted and worked out into perfect combs, except where used in the brood-chamber, and there it stretched half an inch in 9 inches. The sagging was nearly all in the upper half of the comb, and where more than this is noticed, you may put it down a fact, that it is an adulterated article. A few days later in the season, I learned that our worthy friend, Capt. J. E. Hetherington, was using wire in foundation in the brood combs, to prevent it from sagging. The idea struck me favorably, and I cried, "Victory at last!" Still, an important point was to be solved, viz.: How can the wire be run in the foundation without injuring the soft metal rollers? After a few weeks' deliberation, I concluded to let the matter rest until the meeting of the North American Bee-Keepers' Association, that I might there avail myself of the knowledge sought for; but as you all know who were here a little less than one year ago, notwithstanding my persevering efforts, I was obliged to submit to defeat. Being determined not to be outdone, I prayed to God that the secret might be revealed unto me, and in a few moments, like a flash of lightning, the whole was pictured out before me. The first point was the necessity of ordering a pair of copper rollers, which were in a few weeks completed by Mr. Washburn, of Medina, Ohio; the most perfect mill now on the face of the earth, and it is the only machine that has been able to make 900 square feet of foundation out of 100 lbs. of wax. The septum of such foundation will be 7-100 of an inch thinner than that of natural comb. Moreover, where wire is desired in foundation, this machine completely fills the bill, for just as many feet can be made with wire in as that without. The wire was found to be no hindrance to the bees, and 48 hours seemed sufficient time to perfect the foundation into natural comb. The queen also made no choice in depositing her eggs; even the cells occupied with wire at the base seemed to be unobjectionable to her. I put on the boxes two-thirds filled with foundation, the next day after the swarms were made, expecting the bees to occupy them immediately. The prospect now was very flattering for foundation becoming a perfect success; but seeing the bees did not take to the boxes, I concluded to examine the brood-nest, when alas! to my disappointment, the bees refused to nurse more than one-half of the brood where it was placed upon the wires. The corroding of the wires seemed to so impair the health of the larvæ that the bees were obliged to remove it. The season now being half advanced, with the brood-chamber three-quarters filled with solid stores of white honey, and not a drop of honey in the boxes, in nearly all of the hives. I therefore perceived at once that the bees were not to be humbugged in the boxes, if they were in the brood-chamber, and concluded to withdraw a portion of the boxes occupied with foundation, and gave them boxes partly filled with natural comb. They immediately entered them, and in a few days all were filled, while those with foundation remained unaccepted. I have now on hand over 3,000 boxes, nearly full of foundation, which have been on the hives a large portion of the summer. I now leave the subject for your decision. The experiments of the past season with foundation comb, have cost me over $1,000. Does it still remain a success with you?

A. J. King replied to Mr. Betsinger, controverting his views, and stating that to him foundation was a great blessing.

Mr. Porter gave his experience, to the effect that while white foundation was a failure with him, the yellow was a great success. He observes little sagging in cool weather.

Rev. J. W. Shearer recommended to have foundation drawn out in the spring, and put aside for use in the swarming season.

Mr. Manum believed that foundation correctly made, and rightly put into the hive, would not sag.

Mr. Oatman. There is no trouble with sagging in Illinois. If any comb sags it is improperly fastened.

Mr. Wright found that foundation from 5 to 7 square feet answered best.

Mr. Oatman thinks that made from 5½ to 6½ feet to be preferable.

L. C. Root is *very much* in favor of foundation in the brood-nest, but is greatly opposed to its use in surplus boxes. Had put foundation in sections, and in the same clamp other sections with comb-guides simply, and the bees filled those without the foundation first. I think foundation without wire not practical, as a swarm cannot be hived upon it. I do not want combs built out in the fall for spring. The plan is not practical. Capt. Hetherington has used 2,000 or 3,000 lbs. with wire, and thinks it a grand success.

Mr. Betsinger offered to give any one $50 who would present him, within a year, a piece of comb of 144 square inches, with perfectly developed brood over all the wires.

Mr. Nellis accepted the offer.

Mr. Porter thought that Mr. Betsinger must have used defective foundation.

Mr. Nellis considered the flat-bottomed cells the best. He has used it in his apiary, and it is not possible to distinguish honey stored on this from the natural comb.

Mr. King asked if by using foundation in boxes he could not do away with separators?

Mr. Nellis answered that he could not.

Mr. Batty said his experience was favorable to its use in the brood-chamber, but not in the supers.

Mr. Bacon used boxes in one hive without separators, and his sections could not be crated.

Mr. Everett considered foundation a success in the brood-chamber, but deleterious in boxes.

Mr. King offered the following resolution: *Resolved*, That foundation, where used in the brood-chamber, has in the past proved a success, and is worthy of adoption. This, after discussion, was carried.

L. C. Root offered the following resolution: *Resolved*, That the use of foundation in surplus boxes is not approved by this Convention.

Mr. King thought such a resolution would stop all investigation.

Mr. Nellis thought, after going home from the Syracuse Convention, where his views of using foundation in boxes met with great opposition, that he was getting to be a humbug, but after the very parties who condemned the foundation there, ordered 300 or 400 lbs., he thought he would go ahead.

Mr. Oatman had visited bee-keepers who had used foundation in boxes very extensively, and they could not be induced to abandon it.

After further discussion, the question was put and lost by a vote of 13 to 20.

A letter from the Rev. M. Mahin was read, as well as an essay by Mr. H. A. Burch.

To Honey Producers and Consumers.

The Bee-Keepers' Association of North America, in session in New York city, October 8 to 11, 1878, realizing the increasing importance of honey production and consumption, respectfully submit the following *facts*, which are no less important to the consumer than to the producer of honey :

It is now only a few years since the invention of *movable-comb hives* opened up a new era in bee-keeping, making it a successful pursuit. Such hives, adapted to climate, furnish every facility for intelligent management and manipulation of both bees and comb.

The invention of the *honey extractor* (a machine which empties the honey from the combs by centrifugal force, without injury to the bees), marks another advance step in apiculture. Thus virgin honey, free from foreign admixture, is obtained, having the flavor of the flower from which it is drawn.

The further invention of comb foundation, made of pure wax, completes the requisites for successful bee-keeping.

The introduction of Italian bees and improved methods of rearing queens and introducing them to colonies, has greatly improved the value of the honey gatherers, both because of their superiority and the introduction of new blood, preventing danger from "in-and-in breeding."

The great drawback is the *sting* of the bee. Danger from this source is now largely overcome by the simple appliances used for the protection of the person and for subduing the bees. The most vicious colony may be subdued in a few minutes.

TO CONSUMERS OF HONEY.

A few facts are necessary to preserve them from imposition. Nice white comb speaks for itself and is generally admired, but the price many lovers of honey will not afford. It makes a beautiful dish for the table, but is no better than *extracted* honey. All comb is wax, and in the stomach it is perfectly indigestible. Extracted honey is the pure liquid honey, taken from the combs by the honey extractor. It is entirely different from what is known in the market as *strained* honey. Consumers help to impose upon themselves by the false idea that pure honey will not granulate. They desire ungranulated honey, and dealers have attempted to supply the demand. Almost all pure honey will granulate when exposed for some time to light and cold. The granulated state is an evidence of purity. Much of the jar honey heretofore sold and recommended not to granulate, is a very inferior article, composed largely of glucose. Granulated honey can be reduced to its liquid state in a few moments by placing the jar in warm water. When thus liquified, it so remains for some time before again crystallizing. Consumers may be sure of a wholesome article by purchasing granulated honey and reducing it.

We would respectfully call upon producers and consumers to unite their efforts to procure, by petition or otherwise, such legislation in their respective States, as will prevent the placing of any adulterations on the market under the name of honey. This becomes the more important, since, during the past year, some American honey has been condemned in Great Britain, as adulterated. We certainly ought to prevent the sale at home of such adulterations as are forbidden in European countries. We suggest the following tests to prove the purity of honey :

1. Honey adulterated with a poor article of glucose will, when poured into a cup of strong Japan tea, turn black, by the action of the tannic acid upon the copperas left in the glucose.
2. A purer article of glucose is detected by pouring strong alcohol on it in a tumbler. The alcohol will dilute pure honey, but it will cause a deposit of glucose as a gummy substance at the bottom of the glass.

TO PRODUCERS.

By full use of improvements in bee-keeping, the honey crop of America may be almost indefinitely increased, and become a great source of national revenue. The home demand and consumption is largely increased whenever people learn to know the superiority of such honey. A large export trade is already commenced, and we are told that the only difficulty is in procuring honey in proper shape and quantity to supply the growing demand. This should be put up in attractive packages or small jars, so as to be readily handled by grocers and consumers.

Honey was for centuries the principal sweet known, and is still one of the most healthful. Improvements in refining sugars have within the last two or three centuries led to its general adoption. Why may not also new improvements in apiculture restore it to its true place as a general favorite, which was lost by bad management and the consequent corresponding limited supply ?

Improvements in bee-keeping, as compared with old methods, are not less than those in railroads and steamboats as compared with former methods of travel.

For mutual information we would advise the organization of local societies and conventions to further this business among all interested in apiculture. THOMAS G. NEWMAN, *Pres.*
E. PARMLY, *Sec'y.*

Rev. J. W. Shearer moved that 1000 copies of the above address to the public, giving consumers methods of detecting adulteration, be printed and sent out to bee-keepers to be inserted in local papers. Carried.

Standard of Purity.

Mr. Oatman. Some have a standard of excellence based upon beauty, and they lose sight of honey-gathering qualities, docility, &c. One of the best tests is their action on the combs. If they run about wildly instead of keeping quiet, no matter how beautiful, they are not pure.

Mr. King says it is impossible to raise the best queens for $1.00.

Mr. Betsinger thinks that bee-keepers will never settle upon a standard of purity. Hybrids are frequently not distinguishable from the pure, and he considers the Italian a hybrid bee.

Mr. Oatman had kept both, and he found Italians gave a surplus in a poor season, while the blacks gave none. They are easier to handle and the queens easier to find.

Rev. J. W. Shearer. There are two so-called native bees in this country—the black and the brown.

Mr. Newman. The Italian bee bred in this country improves after several generations. if bred upon scientific principles for improving the race.

Mr. Rogers and others agree that sometimes a queen will duplicate herself early in the season, and latter her queen progeny will be darker.

Mr. Newman. We may excel in bees as well as in other stock, by the use of the choicest drones and queens.

Honey-producing Bloom.

Dr. Heath described the culture and merits of alsike clover, and asked for further information as to its merits as a honey plant.

Mr. King. It yields honey largely, and is better for stock feeding than the red clover. It dies out except on low rich soils, and requires replanting. The tulip tree blooms just after white clover.

Mr. Betsinger. It blooms in central New York the latter part of June, and yields more pollen than honey.

Mr. King. Sour-wood produces large quantities of honey in the South, equal in appearence to white clover, and I have made arrangements to furnish the trees to bee-keepers. I think they will grow North. It is said that in the Rocky Mountains one acre of Lucerne clover will give pasturage for 100 colonies.

J. E. Moore tried it thoroughly and reports adversely.

Mr. Newman. Sour-wood honey is fine in appearence, but not in flavor, we have a specimen of it in our office; many have tasted it, but none like it.

Mr. King finds its griping qualities undeniable.

The Rev. J. W. Shearer thinks it the finest in the world.

Mr. King had this season kept on the top of his office building 43 colonies, and had had better success with them than when he kept bees on Jersey Heights. The quality of the honey gathered was good, and he thinks them free from the aspersion of gathering from sugar refineries and groceries.

Mr. Newman had samples gathered in the heart of Chicago, Cincinnati, Toledo, &c., of good quality, clear and bright.

A. C. Watson, of Brooklyn, was frequently astonished to see bees working in great numbers on the clover on the battery. It is cut often, which makes it bloom more profusely and increases its duration.

Dr. Burgess, Mr. Newman, Prof. Hasbrouck and others, were confident that the amount of white clover bloom and its duration were increased by frequent cutting.

Mr. Hasbrouck stated that the American linden yielded far more honey than the European linden, on Long Island.

Mr. Van Winkle rose to corroborate what Mr. King said about the honey stored on his roof. He found it very superior.

Mr. King. Honey-dew honey is good and preferable to buckwheat. Alsike clover blooms at the same time as white, but lasts longer.

Mr. Root would. if he had a farm, plant alsike clover for bee pastuage every year.

Dr. Trimble asks if it is practical to put bees on boats to keep pace with the advanceing flora ?

Mr. King thinks there is no reason to doubt the feasibility of the plan, as it has been tried in other countries with success for many centuries. Any want of success in Mr. Perrine's effort on the Mississippi may be overcome by further experience.

Mr. Newman. Mr. Bingham has practiced migratory bee-keeping with success.

Mr. King. Mr. Hoagland's success in California, is due to migratory bee-keeping.

Mr. L. C. Root stated that during the past season he had found eight different parasites on bees, and he thinks bees are benefited, and their activity increased, by long transportation, as in the movement many of these pests are left behind. He then exposed a swindling advertisment cut from the *Country Gentleman*, stating that every hive of bees kept on that plan, &c., would produce a profit of $50.00 yearly. Such advertisements are a fraud and a swindle.

A paper by Mr. C. J. Fox, on bee-keeping in California, was then read.

Mr. King says the various orders of the eucalyptus or blue-gum tree are good yielders of honey.

Mr. Rogers does not believe California to be the paradise of bee-keepers. The climate some years is such that but for the intervention of man, bees would be exterminated there.

Mr. King. The 5 years I resided in California, my bees did well.

A paper describing Mr. Ira Parke's hive was read and commented upon. Each member seems to have a settled preference for the hive that use has made him familiar with.

Foreign Races of Bees.

A paper on Italian bees, by Mr. James Heddon, was then read. Mr. Root moved a vote of thanks for this valuable paper. Mr. Heddon was a practical apiarist and his change of views in favor of Italians was a powerful argument in their favor.

Dr. S. P. Parsons, of Flushing, L. I., by invitation of the President, addressed the Convention. He said he was surprised to hear men speaking of importing queens still from Italy. If he wanted a good queen, he would prefer a 40th or 50th cousin of some of those he had imported at first. He had two regrets about his connection with Italian bees—one was, that he lost about $1,000 by his enterprise, and the other was, that he did not have an opportunity once of letting his bees loose on a New York mob. During the draft riots in New York, one of the leaders of the mob sent him word, that, as he was one of the original abolitionists, they were going to pay him a visit. He gave his men orders to carry his bees and set them upon the edge of a verandah about 15 feet from the ground, and when the mob came near to kick them over, when he expected a rare enjoyment in seeing them scatter the crowd. But the ferry stopped running, and the fun was spoiled. He was requested by the Government, during a tour in Italy, to investigate the bees of that country. He did so. and purchased 24 colonies for himself, from which but one queen and a handful of bees in one hive survived the voyage. Just then he had a visit from Mr. Langstroth, who took the remnants in hand, and nursed them up into a prosperous colony. His last sales were of 800 queens.

It was moved and seconded, that a vote of thanks be tendered Dr. Parsons for his interesting address. Carried unanimously.

The President regretted that Mr. Langstroth was not present to meet his friends, and re-read the communication from him.

Dr. Parsons paid a very graceful tribute to the character of Mr. Langstroth, and his devotion to the science and culture of bees.

Mr. Betsinger moved that Mr. Langstroth be cordially invited to attend the next meeting of the Association, and that his expenses be borne by the Society. Carried.

Dr. Smith, who had traveled extensively in Asia and Africa, spoke about bees of those countries, and his interest in the subject from his youth. He many years ago wrote a little book on bees. He knew more about the bees, than of the different races of bees. He had kept them in the heart of Boston, where they made a great deal of honey, which he once exhibited at Horticultural Hall, but most persons were skeptical about it, and he lost reputation for veracity. Also kept them at the Quarantine grounds, and found them peaceable generally. They were sometimes made angry by the too near approach of uncleanly persons. The perspiration of some persons is offensive to them. There is a small, stingless bee in Brazil, that builds its cells in little cups like an egg cut transversely. When the ants are rearing brood, the ant bear leaves them and climbs the trees and feeds upon these stingless bees, which gives the ants a chance to increase in numbers. One of these colonies was once brought to Boston, but it was so preyed upon by various enemies that it dwindled away. In the Holy Land, about Bethlehem, there are many bees. They are kept in earthen pots made of clay unbaked, placed horizontally in rows, sometimes 200 in range. It is, in truth, a land of milk and honey. The honey is of great excellence. At every step you tread upon flowers. The honey is obtained by taking it out of the end of the cylinder. Bee-culture is very rude in Turkey. In Africa they are not cultivated, but are found in trees. In rocky portions of Greece the bees build in rocks, and the honey is often secured by raking it out of the crevices. The honey is sometimes poisonous, and the poisoning of Xenophon's soldiers has been handed down.

Mr. Shearer gave in full the origin of tanging bees, as connected with the birth of Jupiter.

Untested Queens.

Mr. Alley said that he sent out as good queens for $1.00 as he had done for $2.00 or $2.50.

Mr. King thought it was an injury to the business to send out untested queens.

Mr. Porter thought if Mr. Alley and others could furnish good queens for $1.00, the matter ought to be left to the laws of trade.

Rev. Shearer wished the terms "dollar queens" "warranted queens" and "tested queens" defined.

Mr. Alley replied that a "warranted queen" was one reared from a mother which produced three-banded workers and which he warranted to be good. A "tested queen" was one he knew to be good.

The President defined a dollar queen to be an untested queen, and he thought no Italian queens ought to be sold before being tested.

Mr. Oatman said he had bought many queens from whose colonies he had obtained no surplus, and that he did not secure any till he had bought queens that had been tested and known to be good.

L. C. Root offered the following: *Resolved* that we as an Association advise beginners to buy only tested queens of reliable breeders.

Mr. Nellis thought that the dollar queen business was so well established, that it would be hard to break it up. People wanted cheap queens under various circumstances, and as long as there was a demand for them it would be supplied. He had spoiled his stock by the introduction of imported queens. Many queens brought from Europe were unfit to be put into a hive. He will not import any longer, but will breed up a strain that suits him.

The Resolution was then put to a vote and carried unanimously.

Mr. L. C. Root then read a paper entitled "Hints to Beginners."

Dr. Trimble. Will any one take apprentices? It is stated that even one day spent with a practical man in the working season would advance one very much, and might be all he would need as a stepping-stone to success, while others might with advantage spend a whole season with a good bee-keeper.

Dr. Burgess began by trying foundation and all other things, and had good success.

Petition to Congress on Adulteration.

Mr. King presented the following report from the committee on adulteration :

To the Honorable the Senate and House of Representatives of the United States, in Congress assembled :

Your petitioners, being delegates duly chosen by the different local organizations of bee-keepers of the United States, assembled in National Convention in the city of New York, this 8th day of October, 1878, respectfully represent to your Honorable Body, that

Whereas, The production of honey in our country now amounts in value to near about twenty-five million dollars, and the industry is fast assuming national importance ; and

Whereas, The honey is being adulterated by unprincipled dealers to an alarming extent, poisoning the health of our people, destroying the prospects of producers by bringing the article into disrepute at home and destroying our export trade, with other evils too numerous to mention ;

Therefore, your petitioners pray for a law against adulteration of honey, affixing such fines and penalties to its violation as shall prove an effectual protection alike to producers, honest dealers and consumers of honey, and your petitioners will ever pray.

On motion the report was received and the recommendations adopted.

Miscellaneous Business.

The prize of $25 offered for the best Essay on Fertilization in Confinement, was awarded to Mr. Hasbrouck, which he, in a graceful speech, handed to the President, stating he wished it held by the Association to be awarded at the next October meeting to the person who made the greatest improvement in the means to effect fertilization in confinement. The applause that greeted this action showed that it was fully appreciated.

Balloting for place of next meeting was next declared in order, which resulted—Chicago, 18 ; Cincinnati, 14.

The Executive Committee for next year were elected as follows : Thomas G. Newman, J. Hasbrouck, Ewrich Parmly, E. J. Oatman.

It was *Resolved*, That our next meeting be held in Chicago the 3d Tuesday in October, 1879.

The President called attention to the report of the Committee on granting medals, diplomas, prizes, which was passed, and asked the pleasure of the Convention.

Mr. Porter. As to details, this should be left with the Executive Committee, with power to act. The value of a medal should be in its source, and not its intrinsic value.

It was, on motion, *Resolved*, that the whole subject be referred to the Executive Committee, with power to act.

Mr. King suggests that instead of one person acting as judge, a local judge should act with him, and neither should know the producer.

An invitation of the European Congress of Bee-Keepers to send delegates to their next meeting at Prague, was referred to the Convention.

On motion of Mr. King it was *Resolved*, that if President Newman could attend that Congress and other European Associations of Bee-Keepers, that he represent this Association.

It was moved and seconded, that the bill for rent for the room for the present meeting be allowed and paid. Carried.

The Convention then adjourned to meet at Chicago, Oct. 21, 1879.

THOMAS G. NEWMAN, *Pres.*
E. PARMLY, *Sec.*

Stray Thoughts.

READ BEFORE THE KANSAS CONVENTION.

Your favor of Aug. 8th, asking me to attend your State Convention or send you a few penned thoughts, is received. Thanks for your kind invitation to attend, and while I assure you it would afford me much pleasure to meet with the bee-keepers of your Prairie State, many reasons make it impracticable. I will pen you a few, very few, stray thoughts upon some of the breakers in the way of the future welfare of the honey producer, that if I am correct and you conceive it so, you may be the better able to avoid them. I think you all will agree that if we can raise large crops of honey, and get good prices for it, our future is clear and bright. First, in regard to prices, I must confess that much has been done of late, to at least retard that rapid tendency downward, that our product has taken. I claim that *no* product should be so high that its lovers cannot enjoy it. Again, great care should be taken that an overstocked market does not put its price so low that the producer must suffer. I believe that most of you are aware that our late styles of packages, which are safely transportable, have attracted the attention of dealers and consumers in nearly every part of the old world. This avenue may, I think, be reasonably expected to act as a safety-valve to our honey markets. Those who store their honey in old-fashioned packages, must expect to suffer for their folly. A honey package, to bring a remunerative price, must be independent; by that I mean put up in such shape as to be open to the bids of the WORLD. To conclude this part of my subject, I will say that, positively, everything looks like we were going to protect ourselves in that important part of our present marketing and prices.

Now to the other part of our troubles: How to raise large crops of honey, of good quality. In regard to comb honey, which seems to be taking the particular attention of both producers and consumers of late, its quality is always as good as the flora will admit of. Of extracted honey, there is but one way yet known to keep up its reputation, and give your customers "value received," and that is not to extract it till all capped over and "ripened" by the bees. This plan involves more labor, of both master and bees, and has consequently turned the attention of our most practical producers to the "royal seal of the bees," on raising of comb honey. To aid us in producing large yields we have learned how to prune our combs, or get them straight to start with, how to stimulate our colonies in needed seasons, how to properly construct our hives in size and shape, how to choose the best race of bees, how to supplant poor colonies with good ones, by controlling breeding, and many more ways too numerous to be mentioned here. But now I come to our worst enemy to the success of bee-keepers at large, and that is

OVER-STOCKING.

While it is true that thousands of pounds of honey yearly come and go, with no little gatherers near to gather it up for our hungry cousins across the waters, still there are very many localities greatly over-stocked. I can hardly conceive how one could be favored with a better opportunity to judge of over-stocking than I have been. I have had the entire field a part of the time for 10 years, with an apiary of from 300 to 375 colonies. Now, with 2 apiaries, 1 in an over-stocked locality, and 1 in a field nearly all to themselves, I have a fine chance to watch the results. I have made a careful estimate of the amount of honey probably consumed yearly outside of the surplus receptacles by bees, brood, brood-chambers and comb-building, within an area of 3 miles from my home apiary. In round numbers, it figures up to 125,000 lbs. With this number of bees kept, we shall never get any surplus except at two or three short periods in the best of seasons. I have watched this matter closely for the past 3 years, and now I say, all honor to our old friend Jasper Hazen, while he may have been somewhat at the other extreme, he is much nearer right than most writers upon this part of apiculture. There are too many accommodation theories written under the golden guise of scientific facts. It may be pleasant to see things in a shining way, but to succeed we must see them as they "am", as Billings says. We learn faster by experience, and only of late have had so good a chance to experience over-stocking. It seems as though bee-keeping ought not to be overdone in any locality, while so many rich fields lay totally unused. I have no doubt that honey-producing is destined to become a specialty. The more so, because it is different from any other business. It requires different study, different tools, different tact, and many appliances to make it a success, too costly to be afforded by the owner of a few colonies, particularly when he lives in a well-stocked field. When any field becomes so over-stocked that the business pays no one, the small bee owner will drop out, because he can. The specialist will not, because he cannot. When bee-keeping is run by specialists alone, there will be but little trouble from infringing interests, as no one will care to prosecute the business in a divided field, while whole ones lay open to the sun, and extend a standing invitation to the capital of the honey producers. To beginners who have been deceived by those fellows who scout about the out-skirts of bee literature, writing agricultural papers for personal advertising, I wish to say, that I beg of you not to believe for one moment that our pursuit requires little labor, little capital, little sense, as a return for great incomes. There is no sure royal road to wealth, without industry, thought, and self-denial. Our business is too old to contain a bonanza. It is one of great chance and fluctuation, particularly to the one who makes it a side-issue. For a year or two it will run along quite smoothly, seeming to be almost automatic; but to put and keep it upon a solid basis, and make a permanent success of it, requires thought, labor and capital. It is from bee-keepers of this stamp, that the honey-loving public may expect to be regularly supplied.

JAMES HEDDON.

Dowagiac, Mich., Aug. 27, 1878.

Prevention of Swarms and Increase of Colonies.

Read before the North Missouri Bee-Keepers' Association, held at Auxvasse, Calloway Co. Mo., Aug. 7-8, 1878.

LADIES AND GENTLEMEN:—It has been the custom of nearly all writers on apiculture, to describe the process of swarming and increase of colonies; but the time has come when it is more important to many of us to learn to prevent increase, and to work the whole force for honey. Now, I do not claim that anyone can be entirely successful in preventing swarms or increase; but by strict attention to their bees they may prevent increase, if they work for extracted honey, and have but slight increase if working for box honey. It is best to begin the season with strong colonies, so that the increase of young bees will be gradual. Should you force them to breed faster than natural by giving them empty combs inserted into the brood-nest the result will be an undue proportion of young bees hatching nearly at the same time, and crowding the hive too much. Now, as these young bees remain in the hive about 17 days before they go forth in quest of pollen and honey, we must relieve the overcrowded condition of the hive, and give these young bees something to do or they will become demoralized. Like children they will get into mischief, unless they have something to do. The first thing these idle bees undertake, unless employment be given, provided forage is abundant, will be the building of queen cells. Since we find that swarming is the natural way of multiplying and increasing the species, the honey-bee being governed by the same instinct of all other animated beings, to perpetuate its race, it becomes necessary to see what the usual conditions are necessary to excite swarming. Go to a hive that is preparing to swarm, and you will find that the hive is crowded with honey or bees—usually both—and perhaps not sufficiently ventilated. Now, if you desire to prevent swarming, you must use a hive large enough to accommodate all the bees that one queen can ever produce. You must keep your bees employed, either by taking their honey, or giving them room to build comb. The young bees having their work allotted to them in the hive, as nurses and comb-builders; those young bees not needed as nurses ought to have room to cluster and build comb until they are old enough to go forth in quest of honey. If you are working for extracted honey, you will as soon as your hive becomes well filled with bees, but not too much crowded, place an upper story on your hive the same size as the lower, take one or two of the outside combs, without brood if possible, and put them in the upper story with division boards, then place empty frames between the brood and continue the process as often as the frames are filled until they get strong enough to build combs above, after which give an empty frame as often as needed. Should you use combs instead of empty frames, and get your hive filled with honey before it is thick enough to extract, remove one of the combs and give an empty frame instead, and put a third story on some of your hives to ripen the honey in your surplus combs.

If you wish box honey, place your boxes on as soon as your hives are well filled with bees and they are storing honey. Have one or two boxes filled with comb, if it contains honey so much the better, place starters of comb or foundation in the other boxes—the more comb the better. The boxes should be placed as near the brood as possible, and directly over it. See that your bees have free access to all the boxes, and when you tier up with empty boxes under your full ones, see that your bees have access to the upper as well as the lower boxes. Should you desire to have combs started in boxes at the side of the hive, place your boxes between the brood and entrance, never behind or to one side. Always give your bees upward ventilation in hot weather, and if you have no shade use a loose cover for your hives, raised at one end or side to allow the air to circulate freely below.

The next thing is to tell you how to manage the few swarms which will unavoidably issue. In the first place see that all your queens have their wings clipped. The best time is while the fruit trees are in bloom. Your hives should all be placed on the ground so that your queens can get back, should you be absent at the time of swarming. To prevent further trouble and subdue the swarming fever, extract all their honey and remove all the queen cells, and they will usually give no further trouble the remainder of the season, provided you keep the honey out of their way, and keep them with one frame not quite filled with comb. If you want box honey, the treatment is not so simple. The best plan is, as soon as the swarm is out, move the old hive a few feet from the old stand an place an empty hive on the old stand to receive the swarm; then take and remove your combs, boxes and all, brush the bees off and remove queen cells and give the combs to your swarm, place your boxes on and set the swarm where you want it to remain. Then give your bees some brood and a queen cell in the old hive, place it on its stand, and your work is done.

In conclusion I will give you a report of my success in preventing swarming:

In 1875 I commenced with 77 colonies, had 3 swarms
" 1876 " " 118 " " 11 "
" 1877 " " 130 " " 12 "
" 1878 " " 130 " " 6 "

Report of honey during the same time:

1875	extracted	6,500 lbs
1876	"	13,000 "
1877	"	14,000 "
1878	"	11,000 "
Total for 4 years ending Aug. 7		44,500 "

E. C. L. LARCH.

Ashland, Boone Co., Mo.

North-western Ohio Convention.

This Association met at Toledo, Oct. 3, Capt. W. F. Williams in the chair; A. Fahnestock, Sec'y. *pro tem.*

After the reading of the minutes of the last meeting, and their approval. Mr. Newman, Editor of the AMERICAN BEE JOURNAL, Chicago, addressed the meeting in a very intelligent manner, and advanced the solid truth, that every bee-keeper should use but one kind or description of hive, on account of the facility of manipulating; the prize box (size 5¼x6¼ inches wide) has become the standard section box and should be put up in neat shipping crates; extracted honey must be put up in neat jars so as to be attractive. He also spoke of the use of honey in doing up fruit, and for sweetening cakes, pies, etc. Honey is no longer a luxury; thousands of pounds are now used where but a few pounds were heretofore used. It has now found its way into manufactories, and is largely used for making candy, ales, flavoring tobacco, &c., as well as in every place where sugar or syrups were formerly used.

On the subject of queens he said that we did not want queens merely for their light color or beauty, but for usefulness, industry, etc., and that instead of our importing queens from Italy, we should produce such an improved race that Italy and other nations should, and would, import from us. He has no doubt, that we can raise better queens in every respect than any now imported into this country.

Mr. Newman alluded to each convention having a show of honey, bees, etc., once a year, as it tended to create more enquiry, and bring the matter of honey producers more directly before the public.

Mr. Fahnestock offered the following resolution: *Resolved*. That the National Convention at New York should establish a standard of purity for Italian queens, and that no queens should be sent out by any queen breeder, unless previously tested, and up to the standard.

The following resolutions were passed: *Resolved*, That Messrs. Everett and Newman represent us at National Convention.

Resolved, That the members of this Convention report to the Secretary by letter, the increase, amount of honey, &c., and any other matter of interest.

Resolved, That the next Convention of this Society be held at Wauseon, on the first Thursday in January, 1879.

The committee appointed at a previous meeting on the purity of queens, reported as follows:

An Italian queen to be pure should be of a golden or leather color, medium size, large but fine wings, and active; should be noted for her gentility, industry and prolificness. Her working progeny should be distinctly marked by three yellow bands across the body; they should be mild in temper, but quick on defence, when suddenly alarmed, and gentle in manipulations of the hive, adhering closely to the comb. The purity of the queen can only be tested by her progeny.

THE EXHIBITS.

There were over 40 exhibits comprising all the various kinds of this delicious food.

Among the most prominent of the bee-furniture were a standard Langstroth hive, several sections, and a machine for inserting foundation in sections, by W. D. Parker, Defiance, Ohio.

☞ Geo. Wilson & Son of Toledo, had several styles of Langstroth hives, together with frame sections, bees, &c.

Capt. W. F. Williams, of Liberty Center, exhibited a single frame neuclus colony, with pure Italian queen; also a caged queen with bees.

☞ T. G. Newman, Editor of the AMERICAN BEE JOURNAL, on his way to the National Convention to be held at Cooper Institute in New York, had on exhibition some Italian bees, and drones in alcohol, beautifully marked, from his apiary in Chicago. Mr. Newman also showed several fine samples of honey in chrystal phials from three city apiaries: From the JOURNAL apiary, Chicago; C. F. Muth, Cincinnati; J. Y. Detwiler, Toledo, and B. O. Everett, who is, located a few miles from Toledo.

B. O. Everett, exhibited some fine samples of honey, a Bingham & Hetherington honey knife and various other apiarian supplies. J. Y. Detwiler, exhibited a home-made comb foundation machine, made by electrotyping a sheet of foundation and fastening the copper deposit to a pair of steel rollers. Also, a pair of plates made by the same process. A microscope with several mounted objects, relating to the anatomy of bees. The six jars of honey which were exhibited by J. Y. Detwiler, of this city, was donated to the yellow fever fund by that gentleman.

A. FAHNESTOCK, *Sec'y. pro tem.*

Albany Co., N. Y., Association.

The bee-keepers of Albany county met at Chesterville, Albany county, and held the second semi-annual meeting of the above named Association. After the calling of the roll, and the reports of the Treasurer and Secretary, the President read the following address:

Ladies and Gentlemen:

It affords me great pleasure to greet so many of the bee-keepers of Albany county, after the anxieties, cares, toils and stings of the honey harvest, to discuss the best methods in the management of bees, and I trust that the interchange of sentiments and experiences on different topics may not only be pleasant but profitable. The first meeting of the bee-keepers of Albany county was called at Clarksville, the 11th of May last, when we organized "The Albany County Bee-Keepers' Association," and adopted a constitution and by-laws, and at this time we hope to increase our members, as all bee-keepers are, or should be, interested in an organization of this kind. Every occupation, profession or trade has its association, whose purpose is to better the class they represent.

I venture to say, that according to the number of colonies of bees, that there is not another county in the State that produces less surplus honey, and in as poor-shaped packages for market, as Albany county.

Now, shall we adopt the improvements of leading apiarists of the United States, or still continue to use the old box hive, and have our surplus honey stored in 8 and 12 lb. boxes, that we are obliged to sell at a low price, and to the detriment of those who have theirs stored in single-comb boxes of 1 and 2 lbs. each?

Honey put up attractively commands ready sale and at good prices. The grocer has no call for the 8 and 12 lb. package, hence it is a drug in the market. The old box hive has the capacity but for 4 boxes at a time, so the yield must be small per hive.

This question was settled by the Western bee-keepers long ago. All practical apiarists use some kind of a movable-frame hive, the advantages of which are that with a Bingham smoker, you have full control of your bees; to make a swarm or to prevent it; to keep all strong by interchanging frames or uniting colonies; and to introduce new blood, to prevent "in-and-in breeding."

Stock-growers and farmers understand that if they breed from the same stock, without change, the young progeny will be dwarfed or crippled, and without increase; just so with our bees! Who has not noticed in May and June the large number of young bees thrust out wingless, and with other deformities from this cause?

To have our bees prolific and industrious, we must introduce new blood; give them a good movable-frame hive, with ample room for surplus boxes, and the result will be astonishing!

Some say, "I have no time to look after my bees." Now, as all avocations are followed for the profits, why not make our bees pay? With proper care and attention they will pay, and we shall find a large increase in our receipts, tor all labor and expense bestowed on them.

The President then called upon Mr. Newman, editor of the AMERICAN BEE JOURNAL, Chicago, (who was present by invitation), for a speech. He spoke at some length upon the improved methods of procuring honey and marketing it, &c.

Reports of members, for the statistical table, were then called for and received. New members were also reccorded.

Mr. Newman then delivered a very interesting address touching various points, among which were standard honey package; extracted honey and its uses for food and medicine; in-and-in breeding, and the improvement of our race of bees. He exhibited phials of honey, gathered in the heart of the cities of Chicago, Cincinnati and Toledo; also Italian drones and workers preserved in alcohol, which were far more handsomely marked than any of our bees in Albany county.

Mr. Newman received a vote of thanks for his instructive address.

Upon motion, it was resolved that the old constitution be dropped, and a new one, better adapted to the wants of the Association, be drawn up by a committee appointed by the President, to be presented for approval at the next Convention.

The Convention then adjourned to meet at Clarksville, on the first Tuesday of May, 1879, at 10 a. m. H. W. GARRETT, *Pres.*

T. H. VAN ALLEN, *Sec'y.*

[The Secretary requested us to write out our speeches and publish with this report; but our readers know our views so well on the subjects on which we addressed the Convention, that we prefer to give newer thoughts in the JOURNAL.—ED.]

Central Kentucky Association.

The annual convention of the Blue-grass Bee-keepers' Association took place in Lexington, Tuesday, October 1, 1878.

The meeting was called to order by Vice-president H. C. Hersperger, after which several signed the Constitution and became members.

The Constitution was amended as follows: In Art. X. "counties" changed to "States"; in Art. I. the name is changed to "Central Ky. Bee-Keepers' Association."

The following were elected officers for the ensuing year:

H. C. Hersperger, president; W. Williamson, secretary; J. M. Holman, treasurer; Vice-presidents—J. W. Rose, John W. Bean, W. B. Herring, J. W. Egbert, Thos. A. Hutchcraft, Thos. S Williams, Dr. Jasper.

The secretary offered the following resolutions, which were adopted:

Resolved, That a committee of three be appointed to confer with the president and directors of the Agricultural and Mechanical Association of Fayette county, as to their willingness to encourage apiarists, and the advancement of bee-culture, by offering such premiums at their annual fairs as they may think proper; be it further

Resolved, That each vice-president of this association act as special committee to confer with the president and directors of the agricultural or fair associations in the counties they represent, with the same object in view as the general committee of Fayette county, and each and all report to this association on the first Tuesday in May next.

The president appointed the following committee for Fayette county: W. Williamson, Thos. T. H. Hayes, J. M. Holman.

Moved and carried that this association offer as a special premium to apiculturists a silver medal, the article or object to be decided upon by the committee and president and directors of the Agricultural and Mechanical Association; providing, however, that the report of the committee is satisfactory and endorsed by a majority present at the next meeting of this association on the first Tuesday in May, 1879.

The president then read the following questions for general discussion:

Question.—Will it pay to raise pasture for bees alone?

J. F. Bean said it certainly would if it would pay to raise crops at all; he recommended buckwheat, which he had sown extensively, and although the crop has many times been a complete failure, he felt he had been amply repaid in the benefit it had been to his bees alone. The president and other gentlemen agreed with Mr. Bean.

General Gano said that all crops for bees would pay, as all that the bees gathered was clear profit, and he believes there is nothing more profitable than bees.

The president said he favored every plant that produced honey, and nearly every plant would; but white clover is the best from which honey can be produced. He commenced keeping bees five years ago, and he believed they had been the means of making him a better farmer every year he has kept them, and induced him to cultivate a taste for all that is beautiful in nature that he might never have acquired.

J. F. Bean said that willows was one of the best honey producers. It blooms in February, and the bees gather both honey and pollen from it, and every bee-keeper ought to plant them, not only for their honey producing qualities, but they are a beautiful shade and ornamental tree as well.

Question.—How to prevent bees from raising brood in the upper story?

J. F. Bean said that young colonies should be confined to the lower story, until firmly established.

The secretary said, in the case of old colonies, often the brood-chamber becomes so literally full of honey and brood that the queen has nowhere to lay her eggs, and would naturally go to the upper story, either in boxes or frames, to perform her maternal duty; when, if the frames were emptied of all the honey in them by the honey extractor, it would give ample room for the queen, and insure an active and industrious colony; when otherwise, the whole harmony of the colony is in danger. The free use of the extractor is the best preventative for bees raising brood in the top story.

J. W. Rose agreed with the secretary.

Question.—When to Italianize an apiary, and how to introduce queens?

John R. Williamson. In the working season; the most successful plan he has ever tried was to cage the young queen, put it in the hive, leave the old queen in the hive also, and, in three or four days, take the old queen out, smoke the colony well, and let the young queen loose. By this plan there is no time lost, as the young queen commences as the old one drops off.

Question.—Are there any moth-proof hives; if so, which is the best?

J. R. Williamson said the only moth-proof hives known are strong colonies, and no others are worth keeping. If you have weak colonies, put two weak ones together and make one strong one; otherwise, they are worthless.

J. W. Egbert said he thought a moth-proof hive would be a bee-proof hive ; as to keep moth out, you would also keep the bees out too, and the only sure remedy is strong colonies, and the bees will protect themselves. These statements were generally agreed to.

Elder Gano claimed that his Vanhorn hive was moth-proof.

Question.—What is the best remedy for beesstings ?

The ecretary said a bruised fresh tomato leaf, quickly applied, was an infallible preventive from swelling and pain from bee stings. When that could not be readily obtained, squeeze out all the poison possible after removing the sting, and apply ammonia which is a sure remedy if promptly applied before the swelling has commenced.

Question.—What is required from a beekeeper to make beekeeping successful and profitable ?

The secretary said it could be answered in a few words. Like all well-known successful business principles, it requires study, application, perseverance, energy and labor; without this nothing can succeed.

Question.—What are the advantages of comb-foundation ?

The secretary said straight combs were insured by its use ; more than half the labor for the bees is saved, and all worker comb ; there are other advantages, but any one of these would insure the endorsement of the most progressive bee-keepers in the country.

The president said to use it in small strips, as starters in boxes, it is invaluable ; it was generally agreed that comb-foundation is a valuable and successful invention.

Lexington was selected as the next place of meeting. W. WILLIAMSON, *Sec.*

Our Letter Box.

Holmesburg, Pa., Oct. 10, 1878.

A few days ago the undersigned opened the stomach of a toad and found 16 Italian bees, 2 black bugs and a caterpillar.

D. C. MILLETT.

Wenham, Mass., Oct. 4, 1878.

As the November number of the JOURNAL is likely to have all the matter it can accommodate, I will not reply to Mr. Moon, and to the remarks of the editor, on page 329 of the October number. H. ALLEY.

Dubuque, Iowa, Oct. 4, 1878.

Will the writer on Honey Dew, page 320, please explain where his insects get their material or nourishment to eject so much sweets from. Cows west of the "father of waters" have to be fed to yield milk. To me it is like the production of milk from chalk. I am not yet convinced.

GEO. W. HORNER.

Bluffton, Iowa, Sept. 9, 1878.

"This has been a poor season. White clover was abundant, but yielded honey sparingly. It was so wet that in twenty days we had twelve inches of water-fall. Not a basswood tree blossomed this season. About the last of August storing commenced from fall flowers, yielding abundantly. Extracted from fifty to seventy-five lbs. each from several hives, and a few gave about sixty lbs. in sections. The hives are filled with brood in all stages. The honey is of rather poor quality, and the question now is whether the bees will winter well on it."

O. E. COOLEY.

Farragut, Iowa, Oct. 16, 1878.

For two years I tried black bees. I purchased two colonies in box hives; I transferred and worked with them two summers, and then had three. I Italianized and commenced this spring with them all weak. I built up 22, and with the exception of one, all in good shape. I extracted 300 lbs. of golden-rod honey, and took 200 lbs. of comb honey. I left about 35 to 40 lbs. in each hive for wintering. One-fourth of this not capped; will it do as well as capped, or will they cap it yet ? I used comb foundation and the Kretchmer hive. I think them good, the best I have ever seen. I had a few combs melt down. Have sold 2 queens and bought an imported one, the yellowest I ever saw. I would not do without the JOURNAL. I wish it success and expect to get up a club for it. E. J. ROCKEFELLOW.

[If you have 35 to 40 lbs. in each hive and three-fourths of it was capped when you wrote, it will be well. It is likely that all of it is capped by this time.—ED.]

Cincinnati, O., Oct. 2, 1878.

In the last JOURNAL I see a table giving statistics of a number of bee-keepers as to their successes and failures, in which is recorded many losses of colonies in winter, by improper manner of wintering or *bad luck*. This morning I met a friend of mine who has kept bees for some seven years, and whom I knew to have been successful. He has now about 40 colonies. I asked him about his manner of wintering which he described to me. I then asked him if he lost any last winter. He said, no, *he had never lost one*, at any time. This I call SUCCESS. He is known here as keeping the purest Italian stock, and as, generally, a most successful bee-keeper in every way, although he does not extend much.

HENRY W. STEPHENSON.

Carlinville, Ill., Oct. 21, 1878.

FRIEND NEWMAN :—Mr. C. F. Muth informs me that he has obtained a patent on his extractor. Can he patent an article that has been in general use for years ? I don't believe he is the inventor of the comb-basket as he uses it. I cannot find that he made an extractor with stationary can and revolving comb-basket, as far back as 1874. I find that in 1874, J. W. Winder & Co., advertised a stationary can with gearing on the underside. In 1873, Mr. J. B. Keeler, my neighbor, and myself made and used stationary can extractors. Mr. Keeler's geared the same as Muth's. In the spring of 1874, I made another with comb basket exactly like the one Muth claims to have invented, except the frame of mine was made of wood. Now, I would like you to tell me what you think about the validity of his claim. I have had made, and sold several extractors; don't know that I will ever have another made, but I don't believe in any one patenting things that they have no right to.

J. M. VALENTINE.

[As we understand it, Mr. Muth's patent only covers the inclined sides of the comb basket, and its manner of fastening to the shaft. We are surprised that a patent should be issued on an extractor, after all the essential features have been so long in use.—ED.]

Dallas, Texas, Oct.7, 1878.

FRIEND NEWMAN:—I send you by this mail the Catalogue of our Fair, and also, the awards of the premiums. Judge W. H. Andrews, of McKinney, contested for best queen, and took 1st premium; he also contested for premium for handling and subjugating. I got 1st premium over him. G. A. Linn, of Corsicana, contested for best queen and lost. Mr. Kuper and myself contested for 1st, best display of honey, extracted, in comb and wax; 2d. best package of comb honey, 1 lb. or more; 3rd, bee hive for all purposes, Mr. Kuper had some very fine 1 lb. sections, also a Simplicity hive. I got 1st premium with the regular Langstroth hive and the 2 lb. prize box.

F. F. COLLINS.

Johnson Grove, Tenn., Sept. 21, 1878.

I have 20 colonies in Langstroth hives in good condition. We can winter on summer stands here without trouble. Our honey is mostly gathered from poplar in May, as we have no white clover; bees gather honey here from the pea and cotton bloom, honey from the latter is sour and unpalatable.

JOHN H. SMITH.

Camargo, Ill., Oct. 18, 1878.

I have received one of Shuck's Boss Bee Feeders, and find it a very convenient and easy feeder for bees at the entrance of the hive, with little or no danger of robbers.

A. SALISBURY.

Sumner. Ill., Oct. 5, 1878.

FRIEND NEWMAN: I had a queenless colony, and gave it two capped cells from another hive. In three days I found a young queen in the hive, but she had no wings. She looked all right otherwise. I caught a lot of drones from the hive I took the cell from, as I had no other that had drones in, and gave them to the colony that had the wingless queen; the bees received them; the queen is now laying all right; has no wings, and never had any; I have watched her closely. Our honey crop is very light in this region, owing to such dry weather

W. EMERICK

[This looks like fertilization in confinement, and will no doubt aid Prof. Hasbrouck in solving that problem.—ED.]

◆

The Annual Convention of the Northwestern Illinois Bee-keepers' Association will be held at Shirland, Winnebago County, on Dec. 17, 1878. JAS. E. FEHR, *Sec.*

Business Matters.

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Single subscription, one year					$2 00
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☞ A line will contain about eight words; fourteen lines will occupy an inch of space. Advertisements must be received by the 20th, to insure insertion.

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974 West Madison St. CHICAGO, ILL.

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We send the JOURNAL until an order for discontinuance is received and all arrearages are paid.

We do not send goods by C. O. D., unless sufficient money is sent with the order to pay express charges both ways.

When ordering Extractors, give outside dimensions of frame or frames to be used, length of top-bar, width and depth of frame just under top-bar.

In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additions can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us three subscribers to THE AMERICAN BEE JOURNAL with $6.00. Premium Queens will in every case be tested, but not sent till after July 1st.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce, Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arragements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Our answer to all who ask credit is this: We sell on **small** margins, and cannot afford to take the risks of doing a credit business. If we did such a business, we should be obliged to add at least 10 to 20 per cent. more to our prices, to make up for those who would never pay, and to pay the expenses of keeping book-accounts with our customers—this we know our **Cash** customers would not think to their advantage.—This rule we must make general in order not to do injustice to any one. The cash system gives all the advantage to cash customers, while the credit system works to their injury. In justice to all we must therefore require **Cash with the order,** for all Apiarian Supplies.

Honey Markets.

CHICAGO.

HONEY.—The demand for choice lots of comb honey, in single comb boxes is good, and bring from 11@13c readily; honey in 2 and 3 comb boxes being a drug at 10@11c. Choice extracted honey is quoted at 7@8c: but there is not much demand for it.

BEESWAX.—Prime choice yellow, 23@25c; darker grades, 18@20c,

CINCINNATI.

COMB HONEY—In small boxes, 12@15c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz,, $4.50; per gross, $50.00.

C. F. MUTH.

CALIFORNIA.

HONEY.—Receipts not large. There is some anxiety to realize, in most cases, which makes an easy market with frequent concessions. Some fair comb will only bring 8c, and some good extracted is sold at 4⅞c. Exports for the week were: Liverpool, 63,784 lbs.; China, 52 cases; Australia, 445 cases. Quotations are as follows: Comb, white, 9@10c; comb, dark to medium, 7@8c; extracted, 4¼@6c.

BEESWAX.—25@27½c.

STEARNS & SMITH, 423 Front St., San Francisco, Cal.

NEW YORK.

QUOTATIONS.—Best fancy white comb honey, new, 17@20c; extracted, new, 8@10c; buckwheat comb honey, 13@15c; beeswax, prime, 27½c.

H. K. & F. B. THURBER & Co.

◆

☞ We have gotten a nice Label for Crates, with blanks for addressing, as well as to write the name of the shipper. Price, 15 cents per dozen, postpaid; or 75 cents per 100.

◆

☞ For *nice* Comb Honey, in Prize Boxes, we pay the highest market prices.

Bingham & Hetherington's Knife

AND SMOKER CORNER,

Will contain a short card from some one every month. See Bellows Smoker card on another page.

Oxford, O., Sept. 30, 1878.

Mr. T. F. Bingham—Dear Sir: Excuse the long delay in the acknowledgment of your courtesy in sending me one of your smokers. It is only within a very short time that I have been able, for nearly two years, to take any interest in bee matters. Your smoker has been in daily use for some months in a friend's apiary. He is enthusiastic in its praise, and after seeing how greatly it facilitates the handling of bees, I can most heartily endorse all that he says of it.

Yours, very truly, L. L. LANGSTROTH.

We have many reports from the new uncapping knives, all of which state that they are a great improvement, doing much more and better work than any other knife.

BINGHAM & HETHERINGTON.

Abronia, Mich., Sept. 23, 1878.

GET THE BEST

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HEAD-QUARTERS!

We wish thus early, to inform our friends and patrons that we are in the field and

READY FOR BUSINESS!

For the Season of 1879 we shall be the HEADQUARTERS for Langstroth and Modest Hives, Prize Boxes, Separators, and all the necessaries in the bee-keeping line. As we are just a LITTLE AHEAD of ALL COMPETITORS in producing a fine article of COMB FOUNDATION, we shall lead the trade!

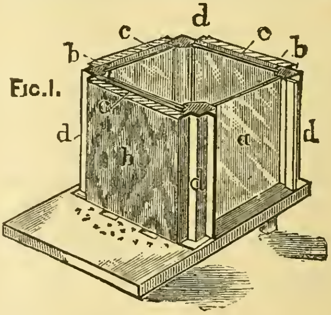
Make a note of these points, and write for our NEW PRICE LIST.

J. OATMAN & SONS,

Dundee, Kane Co., Ill.

WORRALL'S CENTENNIAL HIVE.

FIG. 1.



Always winters successfully in the coldest climes, when properly prepared. As important in summer as winter, the bees never cluster outside on account of heat, as the glass plates and dead-air space equalizes the temperature. You can ascertain their condition in a moment, and swarm them at your leisure, when it ought to be done. This hive has a cast-iron frame, with glass sides, making it an *Observatory Hive*. Doors fasten on over the glass.

Sample Hive complete with glass		$5.00
Hives, in lots of 5	each,	4.75
do. " 10	"	4.50
do. " 25	"	4.00
Extra sets of Castings, with sample hive,	"	1.50
Castings and material ready to nail, without glass, in lots of 5 or more, each		3.50
Lawn Observatory Hives made of black walnut, oiled, complete		6.00

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Pure Italian Bees & Poultry

I will continue to rear PURE ITALIAN BEES and eight varieties of PURE BRED POULTRY, at prices to suit the times. Drop a postal for what you want.

R. M. ARGO,
Lowell, Garrard Co., Ky.

febtf

The American Bee Journal

Devoted Exclusively to Bee Culture.

VOL. XIV. CHICAGO, ILLINOIS, DECEMBER, 1878. NO. 12.

Editor's Table.

☞ For the contents of this number see the General Indexes.

☞ We find that the recent ruling of the Post Master General does not admit bees to the mails.

☞ We expect to attend the Conventions at Carson City, and Grand Rapids, Mich., on the 3d and 4th of December, and hope to see a large attendance at each one.

☞ Syrups are carried by railroads at fourth class rates, but extracted honey in barrels is charged first class rates—a manifest injustice to honey producers and consumers.

☞ A swarm of bees at Cold Spring, Conn., hived in a chimney flue, which they stopped up with comb five and half feet wide. Sixty-seven pounds of honey were there found stored away.

☞ To create a demand for your honey—scatter the small pamphlet on "Honey as Food and Medicine" among all the consumers in your vicinity. See new prices on the third page of the cover of this JOURNAL.

☞ The Hastings (Minn.) *Gazette*, has an excellent description of the apiary of Mr. Wm. Dyer, of that city. Mr. D. is a progressive and successful apiarist, and fully entitled to the honorable mention of the *Gazette*.

☞ The wise weather prophets say that the coming winter will in all probability be one of the most severe we have experienced for some time. Let the bees be well prepared for such, so that they may not suffer, if it comes.

IN Whately, Mass., Asa J. Crafts has bees that have decended and been kept by his father, grandfather, great grandfather and great, great grandfather, John Crafts, who died in Hatfield, May 23, 1730. His son Benoni Crafts, one of the earliest settlers in Whately, brought them thither about 1758.

☞ The Rev. L. L. Langstroth has, during the past month, made a very pleasant visit to Prof. Cook, and the Michigan State Agricultural College. We are glad that his health is so far recovered as to allow of this visit. It will no doubt be as invigorating to his physical system, as it has been replete with intelligent associations.

☞ We can hardly consent to close the present Volume without entering our most earnest protest against the use of glucose for feeding bees. A report has just come in where an apiary of several hundred colonies has been entirely destroyed by feeding them glucose, or grape sugar as it is called. It was ¼ honey and ¾ glucose ; but the bees are all dead and their foolish owner is a wiser but a poorer man ! A clergyman had 8 colonies, and fed them glucose, but they *all* died, leaving him to mourn the loss. Let us say, *Beware!* It is poison, rank and deadly !

☞ On the night of November 5, our apiary was robbed by boys in search of sweets, and fond of adventure. The weather was cold and the bees not active, and hence they succeeded in the robbery. They took 8 frames (mostly honey) from one colony, leaving only 2. The bees they brushed off in a wooden building adjoining. They succeeded in carrying off quite a load of frames with honey and brood, and destroyed many bees.

In September we had 14 colonies of bees destroyed by the Railroad Company, in transit, by rough handling. Every comb was broken down, all the bees and queens were killed, and the honey had all leaked out in the car. The way that railroad employes handle goods, it is wonderful that anything goes safely.

☞ When binding the JOURNAL, cut the threads and remove the title and Index to Correspondents from the centre of this number, and place it in front of the January number. Leave the Indexes at the end where they are. These Indexes are full and complete, and will be found very convenient, enabling any one to find the article desired in a moment. These Indexes have cost us much time, patience and labor.

CLUBS.—Those who feel disposed to get up clubs for next year are requested to send to us for extra copies to use for that purpose. Quite a number of clubs have already been sent in, and many more have signified their intention to get up clubs. It is indisputable that the AMERICAN BEE JOURNAL stands at the head of all bee-papers, and with its enlarged size, and decreased price it is an easy matter to get up clubs in every County. It is not only the *best*, but the cheapest Bee Publication in the World, considering its size and matter,—$1.50 per annum, See our new clubbing rates on page 440 of this number.

☞ Samples of the NEW comb foundation, with and without wire, will be sent from this office for 10 cents.

☞ The Louisburg (Kansas) *Herald*, gives the "American Apiary" of Mr. Paul Dunken a two-and-a-half column illustrated notice. The *Herald* says that Mr. D. was offered $1,500 for his bees and a situation with a salary of $70.00 per month to take charge of an apiary near St. Louis. Mr. D. in his wisdom refused the offer.

☞ The *Courier* and *Reveille* of Seneca Falls, N. Y.; the *Standard* of Cedar Rapids, Iowa, and the *Pilot* and *Register* of Marion, Iowa, have during the month contained unsolicated kind notices of the Editor of the BEE JOURNAL. Having spent nearly a quarter of a Century in the Newspaper business in these places, and having a host of friends in each, we appreciate the spontaneous action of these brethern of the Press. Thanks; gentlemen; Thanks.

☞ Mr. Jno. R. Clark, Roselle, N. Y. has sent us Mrs. Lizzie E. Cotton's latest circular, and wants to know if it is safe to send money to her for her hive, bees, &c. At the National Convention, Mr. L. C. Root, produced one of her advertisements, as published in the *Country Gentleman*, stating that every hive of bees kept on her plan would produce a profit of $50. yearly. It seems to us that such a claim should at once show that no credance should be given to any statements from one whose claims are so preposteous. Letters have been published within a year stating that the writers had sent money to her, but could get no returns. A little thought and the exercise of a small share of common-sense would prevent any one from sending money in answer to such extravagant advertisements. Such results cannot be obtained; and money sent to obtain instructions to do it, is only thrown away. We know nothing of Mrs. Cotton, personally, further than that she wrote us a year ago asking if we would publish an article from her, and we replied that if she sent it to us, it would receive the same attention as other correspondence, and be criticised if published, just as other articles are. But she never even dared to send it, on those terms! Our advice to all is, therefore, give no credance to any of her statements! She dares not come to the light of the BEE JOURNAL—even though she talks so boastingly in her circular.

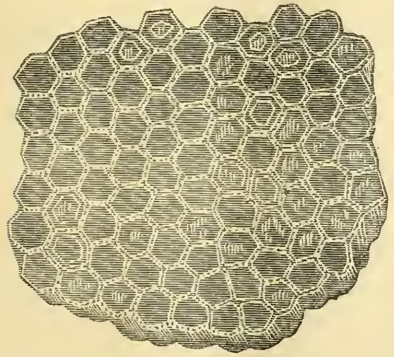
Petrified Honey Comb.

Mr. E. R. Douglass, of Martinsburg, Mo., has sent us another piece of this peculiar stone formation, which he says he picked up in a neighbor's yard, and asks "What is it?" Our friend Prof. Cook very kindly answers this question by the following interesting article :

Mr. Editor : In your November number, p. 372, you speak of petrified honey comb, from Seneca Falls, N. Y. We have many such specimens in our museum. In some cases the cells are hardly larger than a pinhead, in others a quarter of an inch in diameter.

These are not fossil honey comb as you were led to believe, though the resemblance is so striking that no wonder you and the public generally are deceived. These specimens are fossil coral, which the paleontologist places in the genus Favosites ; favosus being a common species in our State. They are very abundant in the lime rock in northern Michigan, and are very properly denominated honey-stone coral. The animals of which these were once the skeletons, so to speak, are not insects at all, though often called so by men of considerable information. It would be no greater blunder to call an oyster or a clam an insect.

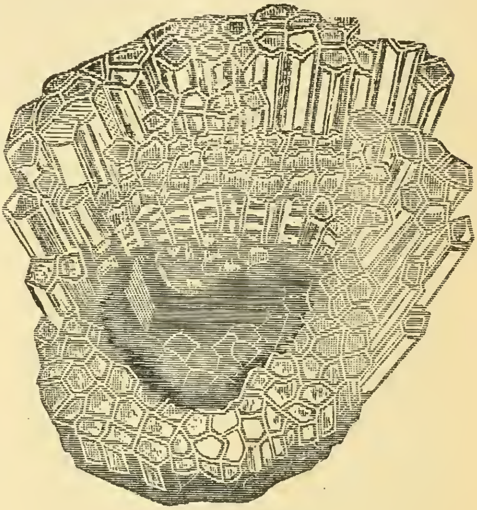
The species of the genus Favosites first appeared in the Upper Silurian rocks, culminated in the Devonian, and disappeared in the early Carboniferous. No insects appeared till the Devonian age, and no Hymenoptera—bees, wasps, etc.—till after the Carboniferous. So the old-time Favosites, reared its limestone columns and helped to build islands and continents untold ages—millions upon millions of years—before any flower bloomed, or any bee sipped the precious nectar. In some specimens of this honey-stone coral, there are to be seen banks of cells, much resembling the paper cells of some of our wasps. This might be called wasp-stone coral, except that both styles were wrought by the self-same animals.



I enclose drawings illustrating two specimens to be seen in our museum, one showing the banks or rows of cells.

A. J. Cook.

The engravings will give our readers a very accurate idea of how these specimens appear.



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☞The Rev. L. L. Langstroth writes concerning the National Convention lately held in New York :

> "That was a grand Convention. Those of the old style were of very little worth. Too much scheming for mere personal interests. Our National re-unions should be the grand arena for the best thoughts and words of our ablest men."

We hope the next National Convention, in this city, will be even more of a grand success than any that have preceded it. The West has long desired to have such a Convention, and now it has been located in Chicago, let the attendance be the largest, as well as the proceedings more interesting than ever. Our New York apiarists will be on hand in strong numbers, and those from the Middle and Western States will be fully represented. The Rev. L. L. Langstroth is expected, as well as the ablest living apiarists on the Continent.

* * *

☞Mr. John M. Putnam, of New Orleans, La., has sent us a flower stem and leaves of the Japan Pear, which was in profuse bloom there all through October, furnishing excellent pasturage for bees.

☞ One Dollar and fifty cents in advance will procure the BEE JOURNAL for 1879. Clubs of five for five dollars, cash with the order. Two dollars per year in all cases, as heretofore, when not paid for in advance.

☞ D. D. Palmer passed through the city last week with a car-load of honey, going east.

☞ Those wishing a Premium Queen for getting up Clubs will now please send *five* subscriptions and $7.50, and we will send them a choice queen in July.

☞ Our new Illustrated Catalogue of "Implements for the apiary" will be ready in a few days and will be sent to any address on application.

☞ A. Stiles, Genoa, Iowa, offers to sell 14 Vols. of AMERICAN BEE JOURNAL for $20.00. He says: "I owe my success to the A. B. J., but my infirmaties compelled me to sell my bees and give up the business."

☞ Silver is now flooding the country and the old "postal currency" is getting scarce. Therefore for fractions of a dollar it is best to buy postage stamps, when sending to this office. One, two or three cent stamps are always useful to us.

☞ The Michigan *Homestead* is the title of a new agricultural paper in Detroit, Mich., the first number of which is on our desk. It is a large and handsome sheet, and is well-filled with good matter. It is published at $1.50 per year.

PRINTED ENVELOPES.—We have gotten up some neatly printed envelopes containing the card of the AMERICAN BEE JOURNAL. On these we will print a card of honey producers, and furnish them by mail postpaid for 50 cents per 100; $1.00 for 250; $1.75 for 500; or $3.00 for 1,000. Samples furnished free upon application.

☞ F. F. Collins, of Dallas, Texas, has been in Chicago and vicinity for a week past, and has chartered two cars for Texas, taking comb and extracted honey, and lumber for hives, crates, boxes, &c. He uses the Langstroth hive and prize boxes, and took all the premiums at the Texas State Fair last fall, on bees and honey.

☞ The queen spoken of on page 368 of the BEE JOURNAL for November we learn was from an apiary in Crown Point, Ind. From the letter of Mr. Spaulding we inferred that it was the one we sold him, as he spoke of both in that connection.

☞ We have been obliged to defer publishing the Proceedings of the North-East Wisconsin Association till our next No. The report is quite long, and we could not do justice to it in the space available in this number of the JOURNAL.

☞ The Maryland *Farmer* is an old and reliable paper for the farm and fireside, and can be obtained clubbed with the BEE JOURNAL for $2.50 per year, for both. It is conducted with spirit and is reliable authority on all matters pertaining to the farm.

☞ When packing comb honey in boxes, straw is a detriment to it, and of no advantage whatever. It so persistently becomes scattered over the honey, and packing down so easily, its presence is not only no protection, but objectionable.

PURE LINDEN HONEY.—For certain reasons I am particularly desirous of having an analysis of *unquestionably* pure linden or basswood honey, made by the able Prof. of Chemistry, Mr. R. C. Kedzie, of the State Agricultural College, Lansing, Michigan. Any bee-keeping friend advising Prof. Kedzie that he can send a quart of such honey, can learn how to send it, and will confer a personal boon upon.

L. L. LANGSTROTH.

CANADA.—All interested in calling a Convention, are requested to communicate with Mr. W. G. Walton, Hamilton, Ont., who will if desired make proper arrangements for holding such the coming winter.

☞ The petition against adulteration will be presented to Congress in January. Let all who favor it, send for a copy at once, and get it signed and returned to Mr. Dadant, in time to go with others. Mr. Charles Oliver, of Spring, Pa., has just returned three petitions containing 360 names. There is no time to lose now.

"CARMEN."—By Prosper Merimee. The original work, from which the opera of "Carmen," now being presented by Miss Minnie Hauk and Miss Kellogg, was dramatized, has been translated into English from the French, and will be published in a few days by T. B. Peterson & Brothers, Philadelphia, in their popular square duodecimo form, price fifty cents, uniform with "Theo," "Kathleen," "Savell's Expiation," "Dosia," "Marrying off a Daughter," and "Sonia," published by the same firm.

Welcome to an Old Friend.

The Rev. L. L. Langstroth has so far recovered from his prostration of several year's standing that he is able again to attend to his correspondence, and offered to furnish an interesting article for our last JOURNAL. Why it did not appear is explained by the following, which came to hand just as we were going to press :

Oxford, O., Oct. 25, 1878.

FRIEND NEWMAN:
After promising you an article for Nov. I found myself so overwhelmed with business after my long sickness, that I could not get it ready—will send it for Dec. No. I desire through the AMERICAN BEE JOURNAL to assure all your readers of my hearty sympathy and co-operation, to the extent of my ability, in all efforts, to advance the best interests of apiculture. Very truly your friend,
L. L. LANGSTROTH.

In a recent letter Mr. L. promises us some interesting articles on "The personal reminiscences of an old bee-keeper ;" in which he will tell how he became interested in bees, and relate the steps by which he reached the invention of movable frames. He will also give the history of the importation of Italian bees, &c. These recollections will be exceedingly interesting to many of our readers, and we feel sure that they will be read with more than ordinary attention by all. We hereby renewedly tender to Mr. Langstroth, the veteran scientific bee-keeper of America, a hearty welcome to the BEE JOURNAL. We are glad to know that his interest is unabated in the subject of bee-culture.

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☞ At the Michigan State Fair, we notice that Frank Benton carried off 9 prizes, being for box honey, hive, Italian bees, nucleus, extractor, smoker, veil, comb foundation, introducing cage, &c. H. D. Cutting, W. Spedding and Henry Bidwell took the other prizes in this department. The committee of award embodied the following in their report : "Your committee desire to make particular mention of exhibits by Frank Benton, of Detroit, all of which must be of great practical use to all engaged in the bee business. We have recommended a small discretionary premium, but suggest that instead of the premiums a diploma be given for each article. The honey is all good, and it has been a difficult matter for us to decide which is best."

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ANOTHER SMOKER.—Mr. Scovell has sent to our museum a smoker which he has made, and asks our opinion of it. It is in all essential features a copy of the Bingham smoker ; the few changes but weaken it, and makes it less desirable. It has the *essential* "cut off," but located differently, and a small wire hook to hang it up by. Should it be hung up while hot, close to any thing inflammable, a damaging fire may be the result.

Mr. A. J. King, in his address before the National Convention, on the "History of bee-keeping," remarked :

> "Mr. Quinby, invented the best form of bellows smoker then in use, which has been further improved by the addition of the direct draft principle, invented by Mr. T. F. Bingham, which leaves nothing more to be desired in this line."

We fully agree with Mr. King. The smoker of Mr. Scovell and also the one made by Mr. King, are efforts to utilize the direct-draft principle, which has made the Bingham smoker so popular. In form both are like Bingham's, but more complicated, requiring machinery to do imperfectly what Bingham's accomplishes perfectly without.

Had Mr. Bingham made no effort to patent his smoker, it is quite probable that no practical effort would have been made to make any different !

Until they can get up something essentially different from the Bingham smoker that will accomplish the same result, we advise all to be satisfied therewith. Bingham's inventive genius is entitled to the full credit of his excellent invention of the direct-draft as applied to smokers.

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☞ The papers almost without exception are now proclaiming the advent of better times—the "panic" and "hard times" seem to have spent there fury upon us, and the heavens look brighter. The general "thanksgivings" of the past week have therefore been hearty and appropiate.

Seasonable Hints for December.

The bees being now in winter quarters, every wide-awake bee-keeper will be looking around, and preparing for next seasons' wants. Making hives, honey boxes, &c., should be foremost in the catalogue of preparations; and for these, well-seasoned lumber should be selected. The hives must be substantially and accurately put together, and should be well painted. Hives thus made cost a little more than the "heap-by-cheap" ones, but are much the cheapest in the end.

Some will find it to their advantage to purchase hives cut, ready to nail together, and for boxes and sections, this plan will be economy for almost all. Care should be taken to have good materials—quality being of more importance than price. It will be well, of course to buy as cheaply as is consistent with obtaining first-class articles.

If you order hives, or material for them, boxes, crates, &c., do so early enough to avoid delays caused by the rush of those who neglect it till just as they need them.

The producer should bear in mind that uniformity of packages for comb honey is very important. To this end let all use the prize box. It can be used on any hive and may be glassed or not as may desired. Use tin separators between all combs of surplus, so that they will pack well together, whether glassed or not. Let the tin separators come to within one-half inch of the top and bottom of the boxes, thus leaving a passage way for the bees above and below, and preventing their building out wider, as they will be likely to do, if the separator leaves more space than one-half inch at either top or bottom.

Use the prize crate for shipping; it will contain one dozen prize boxes or sections and may be glassed, if the boxes are not. Ship all honey with the top bar downwards, as that often saves weak combs from being broken down, and all in the crate being "mussed up' by it. If comb honey be sent by freight, it is all important that it is properly labelled "this side up; handle with care;" and have crates all properly addressed. When possible, see to packing it into the car, and always have the combs ride lengthwise of the car, so that the "bumping" will not be likely to break them down. Labels are just as essential when sent by express.

Exporting Honey to Germany.

The San Diego (Cal.) *Union* remarks on this subject as follows:

"Mr. C. J. Fox expects to ship one hundred barrels more of our first-class San Diego honey to Germany by the next steamer. We have a notion that when the German palate gets a good taste of our honey there will be a steady demand for it over there. It is the cheapest sweet that the people can use, while the quality cannot be equaled."

The Los Angeles *Star* adds:

"Those desiring to ship to Europe through Mr. Fox, can consign their honey to his agent, Robert Difan, 204 Sansome street, San Francisco. The packages should be marked P. Liefmannsohne, Hamburg, Germany.

"The Los Angeles Bee-Keepers' Association has pledged the patronage of its members to the proposed new line of steamers to ply between Santa Monica and San Francisco. The proposition set forth by the proposed line is to the effect that they will carry freights to 'Frisco at $2 per ton and passengers at $8 for the term of ten years, provided the business men of Los Angeles will sign an agreement to patronize said line for the specified time. The annual shipment of honey from this county is no small item, and we are satisfied that the bee-keepers of Los Angeles will pledge themselves to a man to such a measure."

☞ In the notes concerning our visit to the East in the JOURNAL for last month, we inadvertantly omitted to mention a very pleasant visit with Mr. Theo. C. Van Allen, and his parents, as well as the Albany County Convention, presided over by Mr. H. W. Garrett, and held at Chesterville. In the hurry succeeeding our absence from home for over three weeks, it was omitted.

☞ In the winter we enjoy the fruits of the little honey bee's labor during the summer.

Review of a Year's Work.

Volume XIV of The American Bee Journal is now complete! Our work for the year 1878 on the Journal is done! How well it is done our readers must judge. It is a source of much pleasure to us to find such a unanimous approval. As samples of encomiums expressed in letters published during the year, we give the following: To these and the hundreds of others, whose "kind words" were not published, let us say, Thanks! Many thanks! We will add that it is our determination to make the Journal for 1879 better than ever:

"God-speed the American Bee Journal."—Isaac F. Plummer, Augusta, Maine.

"I learn something from every copy of the Bee Journal."—C. H. Dibbern, Milan, Ill.

"You have worked up the Bee Journal almost to perfection."—Orion Siggins, West Hickory, Pa.

"I think the Bee Journal the 'Boss'! It is the first paper I read."—J. H. Riley, Connersville, Ind.

"I would not do without the Bee Journal for three times its price."—J. E. Kearns, Waterloo, Pa.

"I find the Bee Journal an excellent companion and adviser."—L. M. Wainwright, Noblesville, Ind.

"I consider the Bee Journal the *best* bee publication—having read them all."—J. E. Hunter, Jones Co., Iowa.

"I do not see how any one can be successful in bee-culture without the Bee Journal."—D. K. Knoll, Boundary City, Ind.

"I prize it highly. Should it fail to come at the proper time, I feel as though a dear friend was absent."—G. W. Jenkins, Owen, Ky.

"I would not do without the Bee Journal. I shall get up a club for it, and wish it success."—E. J. Rockefellow, Farragat, Iowa.

"The Bee Journal grows better and better every month. No bee-man can afford to be without it."—John Barfoot, New Canton, Ill.

"I could not consent to do without the Bee Journal. It is so valuable to me that I long for its arrival."—R. D. Utiger, Alhambra, Ill.

"I do not see how any one can do without the Bee Journal. I have been handling bees for 40 years."—A. M. Barnett, Valley Mills, Texas.

"I like the Bee Journal much, and the better I become acquainted with its management, the more I prize it."—O. Courtney, Marathon, N. Y.

"The Journal surpasses itself; each issue is an improvement upon the last, in the bright, cheerful appearance and instructive influence of its whole composition."—W. Williamson, Lexington, Ky.

"I have learned more from the Bee Journal, of how to handle bees, than from all other sources, and wish it every success."—R. Corbett, Malden, Ill.

"I have read many papers, but place the Bee Journal ahead. I wish it could reach every energetic bee-keeper in the land."—W. L. Boyer, Ashmore, Ill.

"I am much pleased with the American Bee Journal. It is the largest and best bee paper published in the World."—D. L. Franklin, Boone, Co., N. Y.

"The July No. of the Bee Journal is replete with instructive articles; of itself it is worth to a bee-man a year's subscription."—M. S. Baker, Santa Monica, Cal.

"All progressive bee-keepers should take the American Bee Journal; read it and grow wise; they will never regret it."—G. A. Walrath, West Bay City, Mich.

"I don't see how any one who handles bees can do without the Bee Journal. It is the best paper I ever read, and I have read many."—S. M. Oldham, Reynoldsburg, O.

"My bees came through the winter in splendid order—no loss whatever—thanks to instructions in the "old reliable" Bee Journal."—D. I. Beecher, White Co., Ark.

"If you keep on improving the Bee Journal as you have within the past year, it must become the *ne plus ultra* of bee literature, the World over."—O. W. Spear, Easton, Pa.

"The Bee Journal comes loaded with good things. I can't see how it is possible to make it so much better every month. It is always a welcome visitor."—Thomas J. Ward, St. Mary's, Ind.

"I hail the coming of the Bee Journal with joy. It is the greatest light we have on bee culture, bringing ideas, not only from the editor but from all the other experienced bee men of the land."—L. A. Taber, Holyoke, Mass.

"The American Bee Journal has saved me in clean money $56.25 in the matter of hives alone in two years, to say nothing of the other information I have gained from it. Those who do not take it, stand in their own light."—R. Matthews, Pontiac, Ill.

"I am among the many who are glad that the American Bee Journal fell into the hands of those who have no hobbies to ride or axes to grind—to make money by—well, stealing others' inventions, without giving credit to whom it is due. I only express the views of its many readers."—F. A. Snell, Milledgeville, Ill.

"The Bee Journal is pre-eminently above all its competitors. It is full of fire, enterprise and vim; it discusses the various questions pertaining to bee-culture with spirit and energetic thought; it is an honor to its Editor and to the interest which sustains it. It has no individual axe to grind, but it is the fearless champion of all that is useful and good; steadfast, unwavering, honest; never vacillating or swerving, but true as the needle to the pole to the interest of bee-keepers. It should be taken and supported by every one interested in bees or honey."—*American Grocer.*

Book Review.

BEE-CULTURE ; OR SUCCESSFUL MANAGEMENT OF THE APIARY, by Thomas G. Newman, editor of the American Bee Journal.

In this little hand-book of 80 pages. Mr. Newman has given us a short, clear statement of the science of bee-keeping by modern methods. The first 24 pages are devoted to "The Natural History of the Honey Bee," and give, in language as free as possible from technical, scientific terms, a popular statement of what is known about the bee. As successful bee-keeping depends so largely upon a knowledge of the nature and habits of the bee, this chapter will be found one of the most valuable in the book. I have seen an objection urged against Prof. Cook's "Manual," because it devotes so large a space to a presentation of the natural history of the bee. Surely such objection was not well considered. A man who is ignorant of the natural history of the bee may, for a time, succeed in bee-keeping by slavishly following the directions of another, or by a run of what is called "good luck," but emergencies will arise to which his rules do not apply, and in which his boasted "luck" will fail. He loses his bees, and retires from bee-keeping in disgust. The man who has a fair knowledge of the nature of the bee can meet such emergencies by methods of work rationally based upon such knowledge, and he will in the long run succeed. All wise friends of bee-keeping will strive to diffuse correct knowledge of the bee.

Next, in a chapter of 10 pages, Mr. Newman considers the "Establishment of an Apiary," treating briefly all the topics from "Situation and Stocking" through to "Honey Bloom." His statements here are based upon the experience of our most successful bee-keepers. The beginner will find every paragraph full of sound advice.

A chapter on "Hives and Surplus Honey Receptacles" follows. Mr. Newman is an ardent disciple of the Langstroth hive, and of the "prize" honey section and the "prize" shipping crate. Certainly the prize section and prize crate are most excellent. As to comb honey they leave little to be desired, especially if Mr. Moore's paste-board caps shall prove practical and economical. There is no doubt, either, that the "Langstroth" frame is a good one, but some of us who acheive with the "Gallup" frame just as good results, to say the least, and who claim some strong points in its favor when it comes to practical work, are not able to see the probability that the Langstroth frame "will ere long supplant all others" quite so clearly as Mr. Newman sees it. Hence we make a gentle protest against the positiveness of his statement. Probably those who use the "Quinby" and "American" frames would have, also, a word to say. After all, it is true, however, that the larger number of beginners in bee-keeping need positive directions. They are bewildered and disheartened by distracting statements as to the merits and demerits of different frames. It is best, perhaps, to tell them to adopt a particular frame, for, as Mr. Newman says in this chapter, "proper management of the bees has much more to do with good results than any form of hive or size of frame." What is said in this chapter about the importance of securing surplus comb honey in attractive shape, assorting it, grading it, and putting it in market in beautiful condition, cannot be too strongly commended. A large part of the comb honey comes to market now, especially in the villages and smaller cities, in very slovenly condition. Such honey is a positive damage to every producer in the vicinity.

The next chapter is given to the "Honey Extractor and its Use." The author does not advocate the exclusive production either of comb or extracted honey. In this he is undoubtedly wise. Honey is good in both forms, and will be in demand in both forms. The beauty and excellence of comb honey make it so desirable that it can never be supplanted. On the other hand the cheapness and excellence of extracted honey will constantly increase the demand for it. Thoughtful producers will labor to increase the demand for both, and will produce whichever in their locations is most profitable.

In the chapter on "Comb Foundation and its Use," there is a good statement about this new help in bee-keeping which has so rapidly come into wide popularity. Then, there is a chapter on "Italianizing," "Dividing" and "Swarming," and finally one on "Managing and Quieting Bees," both of which are full of practical directions. The little book is amply illustrated. Its table of contents and index enables one to find readily any topic desired. The paper is good, and the print is clear.

Unfortunately, the proof-reader did not always have his eyes about him. That he should have allowed "ceiled" cell to stand for "sealed" cell is unaccountable. Mr. Newman says in his preface, that his pamphlet is designed to "supply a *cheap* work for the beginner." As such, therefore, it should be judged; and as such, it seems to me to be very good indeed. O. CLUTE.

Iowa City, Iowa, Oct. 21, 1878.

[A few errors in the first edition, now nearly exhausted, will be corrected in the next edition of the work.—ED.]

Foreign Notes.

Translated from *L'Apiculteur Alsacien-Lorrain*,
BY FRANK BENTON.

Comb Foundation—No. 2.

Not rejecting wholly the view taken by some, namely: "That colonies provided with combs exhibit less activity than those that have to build them, and that thus there is a compensation for the work of the latter," we would ask: Do we not with comb foundation leave something for the bees to build?

Suspend your sheet of wax in a vigorous colony between two finished combs, and, if the flowers are yielding, and the young queen is laying rapidly, four days will suffice to have the cells nearly completed and to enable you to see a little honey, and, even more, many eggs. I have often noticed that the queen will take possession of cells the walls of which are scarcely built out. But with comb foundation the work goes on over a large surface at once, hence the laying can be conducted with a degree of rapidity that is impossible under ordinary circumstances. From this comes, 1st, an increase in the population of the hive, and, 2d, as a result, an increase of the products, because the quantity produced depends more or less on the strength of the colony.

"This is all very well," you say to me, "I admit the acceleration of the growth of a colony with a young queen, by means of your foundation; but you have said considerable about the loss which you sustain when the bees are kept secreting wax. Now I do not see that comb foundation is such a great saving, for, in order to complete the work it is necessary to have material for the walls of the cells."

Do not be deceived, the material is in part before you. When the work of building out comb foundation commences, our intelligent insects hollow out the base of the cells, that is, they gnaw the wax from the bottoms of the impressions. Observe that they follow closely the angles marked out, and which are for them real guides. The gnawings of the wax are not thrown away; our insects are too economical to waste even the least particle. What they remove with their jaws is at once worked over and fastened upon the edges of the cellular base. As the cells lengthen out they preserve the yellow tint of the comb. It even happens often that the cells are built out half way before the white wax—the real work of the bees, becomes apparent. Thus, the less wax to secrete the less honey consumed. And how much time does this work of building out consume? You will agree with me that the brick maker who finds the clay at hand, will make, in less time, a given quantity of brick, than one who must first search for his material two or three kilomtres from his kiln. Thus with our bees. Either the same number of workers is engaged in the labor—then the work advances more rapidly; or there are fewer—which is always the case, and then the excess of workers fly to the fields and return laden with stores. The latter to the apiarist, since wax is not to be procured.

As to the finishing out of the cells—the latter half, (or sometimes a little more, according to the fineness of the sheet), the usual method is employed by the bees. But since half is gained, are we not better off than if all must be built? Our account is even better than this, for the full weight of our comb foundation is used in the construction of the comb. We only have to change one sum—the price of wax. A kilogram (about 2¼ lbs.) of foundation made by Schulz, comes to 8 francs 50 centimes ($1.53); the honey saved by the use of this kilogram being valued at 20 francs ($3.72), we still make a profit of 11 francs 50 centimes ($2.14). Let us, in order that we may not be accused of inaccuracy, make this 1 kilogram less, the quantity of honey which might be collected by the bees detained in the hive to pare down the foundation and build out the first half of the cells; there remains the sum of 9 francs 50 centimes ($1.77). You are not a millionaire, my friend, any more than I am; do not scorn this sum.

Still a stronger word in reference to this discussion of the subject of compensation. If those who invented comb foundation imagine themselves right in supplying it to colonies not having to produce more wax, you see that with it they are pursuing a faulty course, for these same persons claim that it is too thick and that it requires much labor on the part of the bees to get it pared down. Therefore be consistent, gentlemen, and admit, as every one else does, 1st, that comb foundation is not a complete comb, and, consequently, that, if it is necessary to have new wax to complete it, there is no resason for the bees becoming sluggish on account of the indulgence. 2d, that the completion of these foundations occupies fewer workers than would be required in the complete production of as many combs, since half of the material is given to the bees by the bee-keeper. I repeat that the use of comb foundation is the only way of succeeding rapidly in only having strong colonies, and what is certain should not be ignored.

In a future letter we will examine more thoroughly this important point—more important even than that which we have just discussed, for they have been trying to find how to substitute workers for drones, and finally have invented this comb foundation which I recommend to you. I have begun, my friend, with secondary considerations, as you began, in your excellent cellars, by offering us wine of the second quality, so as to pass afterward to the better sorts,—a way permit me to say, which connoisseurs in wines have, but of which no one ever complains. From this, *fac ut bene valeas*,

Liepore, May, 1878. DR. REISSER.

Foreign Items,

GLEANED BY FRANK BENTON.

"Ein Vorspiel im November nur :
Das Volk bleibt meistens frei von Ruhr."

This proverb among German bee-keepers would read in English as follows : "A flight in November only, and the colony remains quite free from dysentery."

FROM Luneburg, Hanover, news comes that the fall weather has been very pleasant and favorable for the securing of the crops, which this year are excellent. The bee-keepers, especially, have been favored with a good harvest, the first "honey year," it is said, since 1859.

THE luxuriance and beauty of the vegetation on the Island of Java, particularly of the flower-producing plants, are said to be wonderful. The island is described as being "the most fruitful island in the world, an Eldorado, a paradise." To Herrn. Rudolf Mayerhoeffer, the active and worthy editor of "*Der Bienenvater*," Prague, belongs the whole credit of having suggested and even urged upon the Dutch government the importation of European bees. Several colonies were safely landed on the island last year, and a new source of wealth to the government has been opened. It seems that in the manufacture of their clothing the inhabitants use much wax, and, thus far, have been obliged to import all of it; now, however, Java has the prospect of being able to export wax ere long. Herr Mayerhoeffer's service in this matter certainly deserves a high reward.

THE Egyptians exhibit great skill in their manner of cultivating the bee. The flowers and the harvest are much earlier in Upper Egypt than in Lower, and the inhabitants profit by this circumstance in regard to their bees. They collect the hives of different villages on large barges, and every proprietor attaches a particular mark to his hives ; when the boat is loaded, the conductors descend the river slowly, stopping at all places where they can find pasturage for the bees. After having thus spent three months on the Nile, the hives are returned to the proprietor, and after deducting a small sum due to the boatman for having conducted his hives from one end of Egypt to the other, he finds himself suddenly enriched with a quantity of honey and wax, which is immediately sent to the market. This species of industry procures for the Egyptians an abundance of wax and honey, and enables them to export a considerable quantity to foreign countries."

IN the *Bienen-Zuechter* for November, under the heading "Postscript," the following appears in large type :

"THE LATEST DISCOVERY.—Artificial capping of honey-combs. Hot, liquid wax is blown upon the open honey-combs by means of the *refraicheur*. The discoverer is Pastor Knoblauch, of Roloffshogen, Pomerania."

Perhaps hereafter one can seal up any honey left in open cells by the bees or fed late in the season !

Mating in Confinement.

By F. J. Grohman, Schoolmaster at Wolfsberg, near Rumburg, Bohemia; Translated by R. Mayerhoeffer :

When the bee-keeper has queens just hatched in a queen-nursery, (the latter is indispensable in securing the mating with selected drones, *i.e.*, in confinement), two things in reference to the rearing-hive must be arranged : First. The queen-nursery is to be fixed in the interior of the hive under the aperture. (The author means here a hole in the top covered with wire-cloth or perforated tin.) Second. We must prepare a roomy frame-work or case, the sides and top of which are glass, and the bottom wood. Through the latter a hole is made, to correspond with the aperture in the top of the hive, and the frame-work or case is then fitted on the hive. The passage connecting the two must be provided with a slide so it can be opened or closed from the exterior. When this case is closely fitted to the hive on all sides we can proceed with the operation.

One of the first hatched queens is removed from the queen-nursery and placed between the wire-cloth or perforated tin which closes the aperature in the top of the hive, and the slide of the glass case which has been placed above. The bees below will feed her through the wire-cloth or perforated tin, so she can remain there till time for her to mate. When the weather is favorable one or two active drones of the desired stock are placed in the glass case ; the slide is opened, and the queen, never having known a larger space than her prison, is quickly attracted by the fluttering of the drones and the streaming in of the light, to fly up and mate, whereupon she is removed and her place supplied by another. No more certain method exist.

Notes and Queries.

Huntsville, Ala., Oct. 9, 1878.

Enclosed find a few blossoms and piece of the stem of a weed that grows in great abundance in the fields and waste places here. It grows from one to four feet high; commences to bloom Oct. 1st, and is giving our bees quite a lift; stands the drouth well; is called by some wire-weed, and for aught I know is a valuable honey plant. Please give proper name. JOHN R. LEE.

[These are asters. See description in Nov. No. of BEE JOURNAL, page 373.—A. J. C.]

Grantville, Ga., Oct. 31, 1878.

I send a specimen of a plant that bees work well on and gather considerable honey from. It grows from 6 to 12 feet high, branches from the ground up, and blooms on every branch. Bees are now at work on it. What is the name, and its value as a honey plant? L. B. WATKINS.

Prof. W. J. Beal, of the Michigan Agricultural College, answers as follows: *Leonotis nepetæfolia* (Lion's-ears). This is an annual which belongs to the mint family, and like most or all of the family, is good for bees. Famous bee-plants of this family are basil, lavender, germander, lycopus, horse-balm, hyssops, majoram, thyme, sage, catnip, dragon-head, blue-curls, scull-cap, &c. These are all general names and are most of them applied to numerous species, and often several genera of this large family.

Orange County, Fla., Oct. 22, 1878.

Can you tell me why bees will not build comb in this climate in summer? In May I was speaking of getting some bees, and some one present said if I wanted to transfer them I had no time to lose, as it was about time for them to stop making wax; that they could not make wax after the middle of June, until late in the fall. But as he could not give any reason, I thought he did not know anything about it, so went ahead and got my bees, put them in Langstroth hives on May 21st, and gave them foundation to work on. For about three weeks they went at it with a rush, and then they stopped. On some of the foundation they had just begun work. From that time until about the first of September, not one cell was built. Since then they have been doing a little, but not working as they did at first. The comb which they had built was all the time full of brood in all stages; and they carried in pollen freely, but very little honey. There are only two others near here who use the movable frames, and they tell me their bees have done the same way. I saw a large colony put into an empty box hive about the 10th of June. One day in September I was passing the place and was asked to stop and look at the bees. I turned the box down, and found they had not built a piece of comb as large as your hand, and the colony had dwindled to a mere handful. I fed one of my colonies for some time, thinking I could get them started building comb, when they found they were getting more than they needed for food, or could store in the comb already built. They would use all I gave them, but no new comb could I get. Where they put it I can't say. There are very few days here in winter, when the sun shines, that it is not warm enough for bees to fly. I have some cane to grind and syrup to make. How can I manage not to kill my bees? I have neither much cane nor many bees this winter, but by next winter I want a good lot of both.

A gentleman living some distance from here, who has no bees on his place, told me he did not think he would exaggerate in saying he killed a peck of bees each day last winter while he was making syrup. If that is so, I will soon grind up all of mine, and my neighbors', too. If you can suggest some plan whereby I can prevent such a catastrophe, I will be much obliged.

N. J. BAYARD, JR.

[I think the case of Mr. Bayard is only to be explained by some abnormal condition of the colony. To be sure, bees, if kept for a series of years in a country where there are no need of winter stores, might cease to make provision for an interval of idleness and rest; but change of habit like this would require long years. Again, in Florida, as elsewhere, there is not a continuous flow of nectar, and there, as elsewhere, bees must provide stores. In California and other of our Southern States, there is an equally high temperature, and yet, we have not heard of such a refusal to build comb. I can but think that some evil had befallen the bees in question. In one case mentioned it was very likely the loss of queen, and the bees were too discouraged to continue their activity.

We have taken all combs away from our bees, at various seasons, even when it was too cold for the bees to fly, and yet they would build comb in every instance, though shut up in their hives, and fed wholly on melted sugar.

In regard to the cane grinding, I see no way to remedy the evil, except to shut up the bees, or else to do the grinding in a building closed against the admission of bees. If the bees were shut up, they might be buried or put into a dark cellar, to keep them quiet. In well ventilated hives, I should suppose they would bear confinement on their stores for two or three weeks, without injury. Perhaps the ground cane and syrup could be covered with gauze, so as to exclude the bees.—A. J. C.]

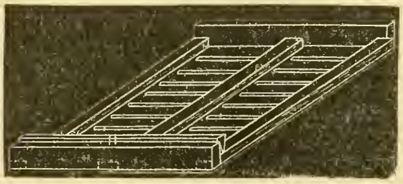
Carroll Co., Miss., Oct. 4, 1878.

"Can you tell me of a good plan to catch millers ?" A. C. WILLERS.

[A strong colony of Italians is the best remedy against them. A good plan to catch the millers is to place a candle or lamp in a vessel of vinegar and water, after dark. Drawn by the light, they will perish by scores.—ED.]

LeClair, Iowa, Oct. 21, 1878.

Enclosed find drawing of comb honey rack to hold prize honey boxes, which I have been trying to improve. It is the same as that advertised, with this addition: Instead of metal rabbets, use thin wood-about ⅛ inch thick. Cut slots, as per drawing, to correspond with the sections used. Its only advantage is in keeping the boxes clean and prevent their sticking to the brood frames. The drawing is calculated for the Gallup hive. It rests on the outer walls of the hive. In putting this light stuff on, I use tin strips, clout nails, which makes it substantial. Please give us your objection if any. T. J. DODDS.



[The idea of Mr. Dodds is well enough; but there was no wedge to keep the boxes together—this we have added to the cut, and with that addition and the use of boxes with tight top bars, to keep the bees in, the rack will work well. The only difference between it and the one used on the Langstroth hive, being the wood bottom to keep the bottoms of the boxes clean.—ED.]

Toledo, O., Oct. 30, 1878.

I wish to inquire if the flowers of the plants "pyrethrum roseum" and "pyrethrum carneum," secrete honey and pollen in sufficient quantity to attract the honey bee ? If so, would it not be injurious to them, especially the pollen ? as I understand the article on the market known as "Persian Insect Powder" is composed of the dried and pulverized flowers of the above plants. Also if the plant is indegenous to our section of the country. If you find the above suggestions worthy of investigation, should be pleased to hear the result through the BEE JOURNAL.

JOHN Y. DETWILER.

[Pyrethrum is another name for our chrysanthemum, which includes the noxious ox-eye daisy, the feverfews and the cultivated chrysanthemums. Our beautiful cultivated species have become so double, that I presume they yield but little, if any, honey or pollen. I have never noticed bees on either of these. The plants are near congeners of the asters, etc., which are among our best autumn honey plants. So we might well believe that the single flowers would yield nectar. I think I have seen bees on ox-eye daisy. Because the dried pulverized flower heads of the C. roseum form an insecticede, is no proof, that the honey or pollen from the plants would be unwholesome to the bees. I should have no fears that it would be. The C. roseum is introduced from Persia.—A. J. C.]

Laceyville, O., Sept. 21, 1878.

MR. EDITOR: I have been a little puzzled to know how bees marked their location so accurately. Will you please inform the readers of the BEE JOURNAL ?

JOHN W. WATERHOUSE.

[This is done through the sense of *sight*. A large percentage of the bees that fly out in the early spring are those that have come into being during the winter and early spring; consequently they do not leave the hive in a straight line, but only go a few inches, then turn their heads towards the hive and oscillate back and forth in front of it; then moving further back, still hovering in front of the hive, with their heads towards the entrance, occasionally advancing towards it, as if to note more particularly the place of entrance and its immediate surroundings, they then increase the distance, taking a survey of buildings, trees, fences, or other noticeable objects near by, after which they return to the hive, and start in a direct line from it. On returning they come directly to the hive and enter; the surrounding objects and the color of the hive are all noted by the bees.—ED.]

Nelson, Ky., Oct. 10, 1878.

1. How can I manage to secure in my frames, straight combs ?

2. What hive will give me the largest yield of honey ? E. JONES.

[1. Straight combs may be secured by the use of comb foundation. That with wire incorporated into it, we think will be the most serviceable as it will not sag in warm weather.

2. Large yields of honey are obtained, not by the use of any particular form of hive, but by scientific management of the apiary.—ED.]

Correspondence.

For the American Bee Journal.

How to Establish a Honey Market.

Much has been written and said in regard to the marketing of honey; how it should be put up for market; how we were to create a demand at home for it, &c. But it looks to me that what those who produce honey by the ton most need, is an established market for their honey, at an established price. At present there is no particular price for honey. We pick up a New York paper and eagerly glance over the market reports for honey, but often lay it down in disgust as we find honey is not quoted at all. We try again, and this time we find honey quoted at from 15 to 17 cents, for best white. We take up another, the New York *Atlas* for instance, and find honey there quoted at 20 to 22 cents, showing to us conclusively that honey of the same grade is selling at random, so to speak. Nor need we go to the outside press to find that honey has no established price, for in our bee periodicals we find one quoting honey at from 17 to 20 cents; and another at 15 to 17 cents. This is not so with farm produce, and other articles of merchandise. If we have a load of wheat to sell, or a few tubs of butter, we can find just what it is worth in New York, and can take it to any place near home, where they deal in these commodities, and get what it is worth in New York, less the freight and a light commission for handling. If we go to these same places with our honey they say: "What do you expect to do with that stuff?" We say, sell it. We are asked what we want for it? Why the market price, of course. The answer is, "We know no established price for honey. We buy pork, eggs, butter, oats, corn, &c., that have a fixed value in them, but honey we don't want. You had better ship it to some house in New York, Boston, or Philadelphia, to be sold on commission, or sell it at home and take what you can get for it." And this is about what most of us do. A few, however, will say, "I have got but a few hundred pounds; I will go to our city (which has from 15,000 to 50,000 inhabitants, as the case may be), and see what I can get for it." They go, stop at a place where they deal in country produce, and ask the price of honey, with the answer, "We have plenty; we do not wish any." "But what is nice honey, in 2 lb. boxes, worth?" "Oh, from 11 to 14 cents; anywhere along there." A sample is shown, which perhaps is looked at, with the remark, "Yes; that is nice; but we do not wish any." Perhaps our friend has some butter to sell, so he asks, "What is butter worth?" The dealer says: "If you have butter to sell we want it; we are paying 18 cents for butter, and if it is the real gilt-edge, perhaps we could give you 18½."

He passes to the next place, shows his sample, and asks what they are paying for honey. "If it is all as nice as that, we will pay you 10½ cents for it." "What is butter worth?" "Eighteen cents, sharp." And so he goes all over the city to find a uniform price of butter, and possibly gets an offer of 13½ cents for his honey, or a part of it, comes home, and concludes to ship it on commission to some house in New York, and run the risk of getting honest returns, or having it smashed on the cars; for even Thurber & Co. will not buy honey this season.

Now, what we want is a fixed price for our honey, as there is for other produce. A correspondent writes thus: "I shipped my honey to ——, New York, but have no returns from it as yet. I think the honey *market* is the vital question for bee-keepers at present. We could get the honey if we were sure of a ready sale for *cash*. What we want is an established market like the butter market, so we can sell our honey any day for cash, at some price according to quality. Can this be accomplished in our day?"

I confess that I do not feel competent to point out a way whereby we can secure an established market for our honey, thereby making it a staple article, but bring the subject before the readers of the AMERICAN BEE JOURNAL, thinking that perhaps by united action it may be accomplished. Could it not be brought about through our National Convention, by appointing a member in or near each city to get all dealers in said city to keep honey at a uniform price, and have that price uniform throughout the United States? G. M. DOOLITTLE.

Borodino, N. Y., Nov. 13, 1878.

[This is a vital point. We started the season's prices—buying at 18 cents, selling to retailers at 20, and they retailing at 25 cents. Soon we found some producer had come to the city, and within a block of our office had left his honey for sale at retail for 15 cents. This was followed by others, and the result is that it has been a loss of thousands of dollars to honey producers. United effort only can grapple with this very disagreeable business.—ED.]

For the American Bee Journal.

Apis Dorsata.

For many years I have taken a deep interest in plans for the introduction of this variety of bees into America. The late Mr. Woodbury, of Exeter, England, and myself, were in correspondence upon this subject. Learning from me the steps I proposed to take for securing it, he requested as a favor that I should wait until the results of his efforts could be seen; offering in the most generous manner to give me the benefit of all his knowledge and facilities, if I thought best not to postpone my efforts. As he was the first to plan for its importation from its native habitation, and as my knowledge of it came mainly from his writings, I felt that it was due to him that I should comply with his request.

His death, so sudden and unexpected, was a great loss to the bee-keeping world; and I have never been able to carry out my plans for introducing *Apis Dorsata* to this country. Just when apiarians were hoping to see the work accomplished by such men as Dr. E. Parmly and others, the whole thing seems to have been abandoned, and the stamp of worthlessness to have been put upon *Apis Dorsata* itself.

Writing this article away from my library, I am not as sure as I could wish to be of some of my statements; but am almost certain that Mr. Woodbury, either in a private letter to me, or in some communication, says that he has seen the comb of this bee, and that while the cells are *deeper* than those of the black or Italian varieties, they have *about the same diameter!* If this is so, it is evident that our bees could utilize their combs, by piecing out the cells, so that the possession of a single queen might give us the means of propagating the race.

That this bee does not confine itself to building upon trees, is certain from this fact given to me by Mr. Woodbury: At Galle, on the Island of Ceylon, from which the English steamers start on their voyage to the Isthmus of Suez, a colony of Dorsata (as he was informed) had established itself in one of the sheds of the steamship company!

My plan for testing and securing it would be substantially this: Send to Ceylon a thoroughly reliable and energetic bee-keeper. He should learn at what season the propagation of these bees might be most safely undertaken; should have all needed hives and other appliances made here, and carefully packed so as to occupy the smallest space, and be put together when he reaches his place of destination. He should take with him some colonies of Italian bees, well prepared for a long journey—obtaining them as near to the Isthmus as possible, in order to make their transport the safer.

On his arrival at the port on the Red Sea (Aden) where the steamers sail for Galle, he should lay over, one steamer, to give them a purifying flight, thus preparing them for the long sea voyage. Arriving at Galle, he should carry them to some place where Dorsata was in full work, honey gathering, swarming, &c. Here he could easily learn whether this variety could be domesticated, and if so, he could breed his queens on the spot. If he found it incapable of domestication, or for any reason not a desirable bee, he could ascertain if a cross between it and the Italian race, might not prove to be the long-desired coming bee. I need not enlarge. In 1859, Mr. A. J. Bigelow, at my suggestion, stopped over, one steamer, at Panama, and thus made the most successful importation that was ever made, of black bees into California. Adopting the same plan, he carried 113 small colonies of Italian bees, the next season, to San Francisco, his bees arriving in admirable condition, only two or three queens having died on the passage, and the colonies having as many bees as when they left New York. With such an expert as Bigelow, Dorsata, if capable of domestication, or any other variety of bee, might be brought here from almost any part of the globe.

Gerstaker seems first to have suggested the value of Dorsata, thinking that from the size of its proboscis and power of flight, it might prove to be a better bee than any now in Europe. The manner in which the natives secure its comb, as described by Mr. Wallace, demonstrates that it can be controlled by man, by the use of smoke.

Will our American bee-keepers raise a fund and obtain the services of some bee-keeper, not too old, strong, wise and of indomitable energy, to test this matter?

If our different missionary societies would, through their missionaries in India, China and other parts of the world, as they so easily might, send specimens of worker-bees, preserved in alcohol, to A. J. Cook, Professor of Entomology in the Agricultural College at Lansing, Michigan, much might be done to advance the cause of practical apiculture. His full and accurate knowledge of bees, and his great skill as an entomologist, would enable him to examine thoroughly the length of proboscis, wing power, capacity of honey-sac, &c., of those bees, and thus to direct us where to get the variety which by proper crosses would improve our present bees. Instead of so much theory and talk, let us get to practical work. With a mere pittance of the sums which have been spent in improving our domestic animals, we can do more in months for settling these questions, than the breeders of short horns, merinos, Alderneys, &c., have been able to effect in as many years. We want the best race of bees, or the best cross in the world.

L. L. LANGSTROTH.
Oxford, Butler Co., O., Nov., 1878.

For the American Bee Journal.

Chips from Sweet Home.

CHAFF.

In the Oct. No., page 347, of AMERICAN BEE JOURNAL, surely "chaff" was given by A.W. Foreman. The thousands of readers of the AMERICAN BEE JOURNAL did not get one valuable idea by which they could get one ounce more of honey or handle bees in less time, by reading that article.

A. W. F. says: "The note Mr. Palmer received from the publishers, confessed their ignorance." Is it wrong to confess ignorance by asking for information? Many times neighbor Scudder and I, as we have done to-day and hundreds of times before, learn of each other.

Again, A. W. F. says: "Because of this confession, it logically follows, that the balance of the book is equally worthless, which I believe has long been well known by scholars."

Which you believe? Then you have only hearsay or some unreliable source, and confess your ignorance in regard to the book, instead of being published, as you intimate, by saying "has long been well known," it is a recent work, and in fact is yet being published in parts in order to keep up to the times.

When a bee loses its sting it is sure to "die in a short time." How long is a short time? We say of the worker bee, that it lives but a short time; but does a bee die in consequence of losing its sting? How long does it live after losing its weapon of defense? When persons are visiting our apiary and one of them is stung, or a bee loses its sting by any means, then you will hear it said: "That bee will soon die." But how soon? We don't know, neither does A. W. F., unless he gets his foot on it.

Many times we have bees about us while at work in the shop, apparently wishing to sting and some even do try it; but upon examination we find they are minus a sting; we have also caught them in the house, etc.

It has long been a mistaken idea that the queen rules; that she leads out a swarm; that she causes them to swarm; that there would be no swarming unless she wished; by her directions queen cells are built, etc. On the contrary, we find it is the bees that rule the queen; true they love and respect her, but only as a mother, and only when she acts as mothers do, they respect her as such by feeding and giving her room, allowing her to pass where she wishes; when she ceases to lay eggs, or but few, she gets her food out ot the cells and crowds her way among the bees the same as a worker.

Will A. W. F. help me to examine a few hives? See those queen cells with holes in their sides? The queen did that and killed the young queens. Why? Because she did not wish to leave the hive, and there she is to-day.

We open another. Hear that piping of queens? Hold that comb; there is the old queen. Do you see that pile of bees in the center of it? We brush them away and see what is in there; they stick and hang. There, now you can see. See what? Only one bee and she has her head in a queen cell. Pull her out and see that young queen. She came out of that queen cell. The bees were determined to swarm, and the old queen did not wish so to do. See the bees pushing the old queen back; now she goes on another part of the comb where bees are not so plenty and tries to pass. What for? Because she wishes to kill that rival; knowing that unless she does kill her, she will have to leave the hive. The bees rule, though the queen does not wish to swarm.

Since reading the A. W. F.'s article I have found several who have seen the bees pull, drag and crowd the queen out of the hive, and many times she is liberated only to return to the hive to be again forced out by the bees. In some cases they kill her, then in a day or two, take a young queen with them; sometimes the queen appears (from outside viewing) to come out of her own free will. But to find how much forcing was used, it is necessary to examine the interior, as we did in those two hives.

And now for No. 3. "The queen is never accompained by a guard of 12 workers, neither more nor less (*i. e.* by any certain number.) but a part of the time she is accompained by workers, which caress and feed her just in proportion to the number of eggs laid."

That which I enclose in the above explains itself. A. W. F. asks: "How did you obtain the fact of this proportion, Bro. D. D.?"

We answer: For many years we kept an observing hive (one comb with glass on each side) and by careful experimenting and watching at all hours of the day and night, and all seasons; we obtained the above fact and many others. "Go thou and do likewise."

STATISTICAL TABLE.

In the JOURNAL for Oct. is a table of the product of 200 apiaries, in answer to a call viz: "How many pounds of comb honey, extracted, also wax have you produced thus far this season?" I was at a loss as were many others to know what was desired from the above question. Some thought, the amount already taken off the hives, others the amount off and on the hives; and others the amount that we expected or had for the whole season. The question being indefinite, the answers were likewise indefinite. One of my neighbors reported 2,600 lbs. now off, his amount is over 7,000 lbs. Friend Newman, have you not done us an injustice in reporting thusly. "This gives an average of only 32 lbs. per colony, showing it to have been on the whole an exceedingly poor year." This has been a poor season with us. We had a month of fine weather in spring which set a large amount of brood rearing. During this month all looked prosperous, a large amount ot brood and plenty of honey; following this was a month of cold weather, during which this brood had to be fed and consumed in many instances every drop of honey and nary a hive any to spare; white clover was abundant but nights were cool, basswood failed and then extremely hot and dry until about Sept. 18, and during fall cool nights, (warm nights for flowers to secrete honey). Last year we had from 150 colonies 15,000 lbs. this season from 200 we will have about 11,000 lbs.

OUR CONVENTION AT NEW BOSTON,

Oct. 2, was a success, we had the best display of honey and apiarian supplies ever shown at any of our conventions. About 600 lbs. of honey being exhibited, 400 lbs. being from Sweet Home Apiary. The different articles of exhibit are too numerous for me to mention, and it is hoped our Secretary, who was sick during most of the season, will give a minute detail of each. Prominent among other exhibits were the articles of T. G. Newman & Son. The wax and honey extractors showed for themselves, but the fine amount of books, papers, honey knives, smokers, etc., was shown by our Secretary in a manner becoming any news depot. And what surprises me most is to know of men who keep bees from 200 colonies down, within a few miles of our convention, to either not attend, or if there, to not buy a bee book or paper, nor take no interest, not even to join. I will have to make one exception, being a man who 10 years ago was well posted on bees but since then has not taken bee publications nor attended conventions till this. He was not aware how much he had fallen behind, and bored the first speakers with questions till they were tired, and he had to be called to order by the chair, this too without becoming a member or subscribing for a bee paper. One of this class of men who a few years ago told me it was useless for him to take a bee paper, or buy bee books, because he knew as much as they, sells his honey each year for much less per pound, because he is not posted. Such are the men who glut our market with honey, put up in inferior order, selling for what they are offered or can get, keeping the price of honey down.

We have just made 9 gallons crab apple jelly with honey, as directed in your work on "Honey as Food and Medicine," and find it equally as good as that made with sugar, and lighter in color. The honey flavor would be desired by those who like that flavor. We exhibited a sample of each at our Convention, and all thought the honey jelly best.

HOW TO GET BEES OUT OF A HONEY HOUSE

and not let any in. This we have long wished for: a window or door that will ventillate the room, allow light to enter, allow no bees to come in, but without our assistance will pass all out that may follow us in, or that may be on the honey which we bring in. Take out your sash of glass, and put wire screen on the casing outside, nail fast at bottom and sides, at top leave an opening of ¼ or ⅜ inch, by placing in strips of that thickness every 6 inches, through which to nail; have your wire cloth extend above the window about 12 inches, and secured against the building the same as top of window. Bees from inside will light against the screen of wire cloth, and immediately climb up, up and up (as it is the same light to them from without), and they are free. But those bees which wish to gain admittance will not try to find an opening against the building, where they can neither see through nor even get a smell, but will try to gain admittance at the window. The door may be made by making a frame of 3 inches wide, bottom and sides, top piece 12 inches wide, on this tack wire cloth within 1 inch of top of door. Try it and improve upon it, and let us know through the AMERICAN BEE JOURNAL the result.

New Boston, Ill. D. D. PALMER.

[It seems to us the questions were exceedingly plain—thus: "Number of pounds of comb honey produced thus far this season." Some few estimated to the end of the season, and those amounts were marked with a * and it was so stated in a foot note. The average of 32 lbs. for "thus far, this season" is small when it is taken into account that the reports are those of scientific bee-keepers. Had it been a promiscuous table, it would have been an exceedingly good showing. Friend Palmer seems to agree pretty well with us for he says: "This has been a poor season with us"—wherein then did we do an injustice?—ED.]

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The Annual Convention of the Northwestern Illinois Bee-keepers' Association will be held at Shirland, Winnebago County, on Dec. 17, 1878. JAS. E. FEHR, *Sec.*

For the American Bee Journal.

How I Tamed a Stubborn Colony.

On Oct. 1st, I straightened up the combs in one of my bee hives preparatory to Italianizing the colony. Over half of the bees left for parts unknown, but the queen remained. Oct. 5th, I united the bees that remained with another colony. Caught and caged both black queens, and afterwards killed them. On the evening of Oct. 10th, I hung a cage containing an Italian queen in the hive. On the morning of the 12th, I opened the hive to release her Italian majesty. No queen cells had been built after I killed the two black queens; but I found freshly laid eggs—also larvæ, so I searched for another queen and I found her and soon had her beheaded. I then removed the cork from one end of the cage and tied a piece of paper over that end, supposing it would all work right. I closed the hive and did not examine it again for some days. When I did, I found everything just as I had left it. She had not been liberated, but the bees had started a number of queen cells. I tore them down and daubed the queen cage with them, then opened the cage, without removing it from the hive, thinking she would walk out. Some of the bees went in and seemed not to molest her; so I left them to themselves for an hour or so. When I went back I was not at all surprised to find queen still in her cage. I tried to smoke her out gently, but when she did come she came in a hurry and ran rapidily down the combs, out of the hive, and tried to fly; but I was too quick for her, I caught her and clipped her wing, ran her in at the bottom of hive; she remained about a quarter of a minute, and then came out again. I caught and put her in the top of hive and administered smoke. Next morning I found her on the bottom board. I gave them smoke to my entire satisfaction, and the queen is now all right, laying nicely. W. E. MCBRIDE.

Belleville, Ill.

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For the American Bee Journal.

Secrets of Bee-Keepers.

I have been much interested in the reports in the Oct. JOURNAL. Some of them to say the least, have a mysterious look but I presume they can be satisfactorily explained. At this time I will direct attention to only two: B. R. Stephens, of DeKalb Co., Ill., bought 80 colonies of bees in the spring. By purchase and otherwise they increased to 102. Mr. S. claims to have secured from this apiary 1,000 lbs. comb honey; 8,000 lbs. extracted, and 80 lbs. wax. The wax was probably secured from the cappings of the extracted honey—being one pound of wax to 100 lbs. of honey. This indicates that much of the honey was thrown out of the combs before they were sealed.

The next report I have selected is from the Messrs. Oatman of Kane Co., Illinois. They claim to have gone into winter quarters with 185 colonies and to have begun the present season with 175. This shows a loss by sales and otherwise, of only 10 colonies, a very flattering result. Their report shows that they have closed the season with 260 colonies, 7,500 lbs. of comb honey, 500 lbs. of extracted honey, and 150 lbs. of wax.

Now, if the reader will examine the Oct. No. of JOURNAL, for 1877, it will be seen that H. A. Burch reports this apiary as follows: "From 150 colonies of bees on June 1st, 1877, Mr. Oatman has increased his stock to 300." As the Messrs Oatman now report having only 185 colonies in the fall, of 1877, I presume they can satisfactorily explain what became of the balance.*

To complete the box honey report I hope the Messrs Oatman, will tell us how much of that is honey and how much is wood and glass. As the most of this honey is stored in small boxes having glass on two sides it would not supprise me at all if one-third of its weight is wood and glass.

I now come to the wax report which is more mysterious than all the rest. For one I should like to know, if not a secret, how to secure 150 lbs. of wax from the cappings of 500 lbs. of extracted honey. That is one pound of wax to a trifle more than three pounds of honey. In Mexico there is a stingless variety of bees that produces a large amount of wax, but I was not aware that we had such a variety in the United States. Gentlemen please explain.

M. M. BALDRIDGE.

St. Charles, Ill., Oct. 15, 1878.

*[In the absence of explanation, we should say that Mr. Burch counted the increase of Messrs Oatman, even though they had over 100 colonies. For they sold many colonies, to our knowledge.—ED.]

For the American Bee Journul.

Bee Pastuage in the South.

In a late JOURNAL some one inquires about the merits of alsike or Swedish white clover as pasturage for stock. I tried it in the same enclosure with red clover, and none of the animals would touch the latter until the last root even of the alsike was devoured.

I was much pleased with Dr. Brown's article on Bee Pasturage in the South; but he should have mentioned sourwood in it. The variableness in the yield of honey from any specified source is well known, but not always remembered. Until last year I never saw bees work on white clover, and so I concluded that in this latitude it would not yield honey. This is the first year since I commenced keeping bees that I have been without buckwheat. I had a half bushel or so of seed but could not get it planted. To make up for its absence from the fields, the bees are gathering honey from several varieties of plants I never saw them visit before.

The writer on "The Sourwood Tree" did not mention its early blooming. I have seen little bushes of it in bloom when only a foot or so high. It is indescribably brilliant in the fall of the year. It has not commenced yet to put on its brightness.

ANNA SAUNDERS.

Woodville, Miss., Oct. 21, 1878.

For the American Bee Journal.

Wintering Bees.

Having been requested to give to the many readers of the BEE JOURNAL my mode of wintering bees, as practiced in this locality, without loss or moldy combs, I will try to make it so plain "that wayfaring men, though fools, shall not err therein."

Choose any soil that is a little descending, and not under water in the spring. Plow, with a corn-plow, furrows the width of hives, as long rows as you need. Throw out the earth on both sides, making the ditch or trench 4 or 5 inches deep, except the lower end, which will be nearly on the surface.

Put any kind of boards in bottom of the trench, then fill the trench with long rye straw. Place it as you would to thatch, commencing at the deep end of the trench.

Place 3x4 or 2x3 inch joist on the straw, against the outside of trench. Now place the hives on the joist close together, with caps removed, also the honey-board or canvas, and place cotton quilts or mats over frames.

Place long straw on the top, commencing at the lower end, 4 or 5 inches thick, letting the straw project over the end hives 2 feet. Stand straw on the butt-end against the hives, on each side and ends, 4 or 5 inches thick. Now place boards 10 or 12 inches wide slanting against the straw and hives on both sides. To form roof, nail together boards 10 or 12 feet long the width of hives, thus, ⋀. Bend the straw standing upright over the top of the hives, and this roof holds it down and leaves a space over the frames on top filled with straw, as well as at the bottom of the hives. If row of hives requires more than one length of roof, where they come together pull out some of the straw that lies on top of frames, right and left, about 4 inches in diameter. Bind this, then crowd the roofs together as close as the straw will admit. Bind the straw to a cone or to resemble the nozzle of a Bingham smoker. Place short pieces of boards slanting at the ends of the hives under the ends of the roof and straw that lies on top of the frames.

Cover the whole with earth from 3 inches at ridge to 4 or 6 inches at base.

Now we have a mound, say 40 feet long, with the straw and boards of the bottom projecting some two feet beyond to carry off any water that may collect, and at top of ridge three perpendicular straw ventilators, and a horizontal one at each end. By the earth being removed from each side to cover the bees, the trench under the bees will be the highest, and to keep it dry plow a furrow to drain off any water that may collect.

Thus they remain quiet, not being disturbed or affected by the heat or cold until the maples look red, or they can find pollen; then remove them at night to their summer stands.

This mode of wintering is no new thing. It has been tried successfully in this locality for a number of years.

The most of our hives have loose bottoms, so the bees come in contact with the straw under them.

I formerly wintered in the cellar. If I have choice colonies and want to kill them without brimstone, I put them there, and when opportunity offers carry them out for a fly, and return them, each time many bees less. Being confined, and more or less disturbed, they become uneasy, and when put on their summer stands they are weak, exhausted, and soon perish, and by the 1st of June they are all gone. I have been tugging in and out all winter, and gained my object. But by way of excuse term it "spring dwindling." H. W. GARRETT.

Coeyman's Hollow, Albany Co., N. Y.

A Valuable Receipe.

The following recipe I have used for the last 13 years, for hog cholera, saving at least 75 to 90 per cent. of all treated. In consideration of the present wide destruction of hog property, I have concluded to make it public, so that an end may be put to the plague. You will confer a favor on all owners of hogs by its publication.

Tincture aconite root, nux vomica, each, 3½ ounces; rus tox, belladonna, secale, buptina, each, ⅛ ounces; white arsenic, 10 grains. Mix.

I have kept the cholera down in my immediate neighborhood for the last 13 years, and as the medicine can be had at almost any country drug store, the publication of the recipe will do a great deal of good. It is a sure preventative. Directions as a preventative. Five drops once a day to each hog in his swill. When the hog is down with the cholera, 10 to 20 drops down either mouth or nostrils. Some claiming each method the best to administer the medicine. Always label the bottle deadly poison, and keep in a safe place away from children.

Buffalo Grove, Iowa. J. M. PRICE.

For the American Bee Journal.

Motherwort.

I have watched with a great deal of interest to see if anyone considered motherwort a bad weed. I believe it to be a good bee plant, and think in many soils it may not be troublesome.

When I lived in the State of New York I saw it growing in out-of-the-way places, by the side of the road, and neighbors garden and classed it with catnip. Twenty-one years ago my mother sowed a little seed here. It did not come up at first; but afterwards, when we found a few plants, we greeted them as an old friend. After a while we thought it was increasing faster than we wanted it, but had no fears of it, till a friend visiting us says, you have quite a patch of motherwort. I asked if she would not like a few plants. The reply was, "Don't you put any of that on to our farm." And then she said, "I have it in my flower garden. I suppose it was sown with some seed, but I cannot get rid of it. It will keep coming up." We found it an easy matter to dispose of the roots, but there was the seed in the ground. We were not as thorough about it as we ought to have been; plants did go to seed. Still we kept it from spreading. The place was rented for three years. When I came back four years ago this spring, it had come up several rods from where it was first sown. And the first thing that was done was to have all the roots dug up with a determination that it should not go to seed again if we could help it.

The second fall we seeded down what ground we could, but that grass had to be weeded as you would a flower garden, till it formed a good sod; and to-day the little plants are coming up from seed, and I do not think there has been any seed scattered since five years ago this fall.

Anything that produces so much seed, and if the seed will be so long in the ground and germinate, is a bad weed in our prairie soil, especially if its perrenial. I think corn could be successfully cultivated where it has grown. But as clover ground is sometimes planted to corn, for three or four years, then sowed to small grain, and in the fall it is seeded to clover again. I think you would invariably find it so with motherwort. I would like a good bee plant, but I am afraid of it. C. P. ALLEN.

Cambridge, Ill., Sept. 23. 1878.

"The Blessed Bees."

I have just received from my friend the author "The Blessed Bees, by John Allen," and I scarcely looked up from the volume, before I had scanned all its fascinating pages.

The book is simple in style, yet very terse, and will charm no less than instruct the reader.

This work graphically portrays what may be done in apiculture, even the first year, if proper preparation is made. Once to think of spending $34.65 for reading matter, before even commencing the practical part of the art! Yet a thorough mastery of the works procured, by this seemingly extravagent outlay, was the necessary prelude to the author's unparalleled success. His previous study and discipline made this mastery possible.

I have read the book with the more pleasure, as it exemplifies what I have long felt to be true, and often stated, that apiculture offers rare inducements to him who will adopt its pursuits intelligently and energetically, not only for its pecuniary possibilities, but also for the wholesome pleasure which it yields. Nor is it a light joy to think that I induced one to undertake a work which, in the retrospect, makes him to exclaim "The Blessed Bees."

In concluding this brief notice, I would enforce the caution urged by the author: "Every person who begins bee-keeping must not expect as great success as I had the first year. *There are few* who will study the business as I did; there are few who can secure locations as favorable as mine, it is not always that the season is as good as was my first year. That when the conditions are as favorable, a success as great as mine can always be achieved, I am thoroughly convinced." I would add that success like that detailed in these pages will be very rarely repeated; but a result much less might well make the young apiarist radiant with delight.

Lansing, Mich. A. J. COOK.

For the American Bee Journal.

Standard Langstroth Hive.

Within the past two years I have seen some inquiries and replies in regard to the size and shape of the hive and frame preferred by Mr. Langstroth ; but have seen no correct figures upon the subject. By examining the directions for making hives in the revised edition of Mr. Langstroth's book, it will be seen that the inside of the hive is 18 inches in length, 14⅛ inches in width, and 10 inches in depth. The outside length of the frame is 17⅜ inches, instead of 17⅝ inches as given by Messrs. Newman and Root. This is an important mistake, as it destroys the interchangeableness of the frames. The hive being 18 inches long, and the frames 17⅜ inches, the space between the end of the hive and the frames is precisely 5-16 of an inch. This is ample space, and was decided upon by Mr. Langstroth after much experimenting. At the time Mr. L.'s book was revised, he preferred to have the top-bars of the frames 1⅛ inches wide, but if I am not mistaken, he afterwards came to the conclusion that it was better to have them only ⅞ of an inch wide, which is now generally the preferred width. Mr. L. makes the top bars 19⅛ inches long, but I think if he had used them only 18¾ inches long he would have liked them better. The width of the hive, whether 14, 14⅛ or 14¼ inches is not so essential, as any of these widths will answer for 10 combs. But the main thing is the depth and length of both the frame and the box. These should always be the same, if the object is to make the standard Langstroth hive.

St. Charles, Ill. M. M. BALDRIDGE.

[True ; we desire, above all, to be *exactly* correct. Preferring to have Mr. Langstroth decide the point, we sent him an advanced proof for his decision. His answer is as follows :—ED.]

[Mr. Baldridge is in error in supposing that such slight variations as he notices destroy the interchangeableness of the frames. Considering the accuracy which may be obtained in making the frames stiff and perfectly square, I prefer the measurements of Messrs. Newman and Root. While beginners may get along better with ⅞ width for the top bars, I still prefer, all things considered, 1⅛. For more than ten years I have made the triangular guide *very small* (not much over ¼ of an inch), and a part of the top bar, so as to need no nailing. This causes the bees to lengthen the pentagonal foundation cells so as to get a little better attachment than when they are built on a plane surface. With the old ⅞ triangular guides, they usually closed the pentagons *very near the shank edge*, and heavy combs often fell out, when not very carefully handled.—L. L. LANGSTROTH.]

For the American Bee Journal.

Theory and Experience.

We are told that a pure queen of the Italian blood will produce pure queens. If her daughters mate with black drones, their progeny as queen and workers will be hybrids ; but their drones will be pure Italians. Now, if these pure drones mate with hybrid queens, would it not purify the queens and workers, and tend to restore the Italian blood ? Then, suppose one should re-queen an entire apiary in one summer with the daughters of a pure queen, so that all the drones shall be pure next year, why should not the queens and workers become purer and purer by the force of the law of nature as propounded in the theory ? Still more, should they now and then mate with a black drone, why should not the great dominance of Italian blood rule out all black blood in course of time. But is it not true, in fact. that the apiarist to get pure Italian blood and keep it pure, must be ever infusing the pure blood of a foreign queen, or of one of undoubted purity—a daughter purely mated ! Still more, how many beekeepers receive imported queens which produce three-banded drones and their daughters do the same. My experience is not very extensive, but I begin to suspect that the notion that the drones of pure queens which mate with black drones are more or less tainted as well as the queens and workers. If I had time, I should try one drone-laying queen from an imported mother, and supply every hive with all the drones I wanted tolerated in my yard. And then I would see what effect this would have on the next queens and their brood. To my mind, the common sense way would be to secure a pure queen for raising queens and a prue drone-laying queen, for drones. Has any one tried it thoroughly ? If so, your readers would I think be glad to read an account of the process pursued and the results. NOVITIATE.

For the American Bee Journal.

Comb Foundation.

In reading the November No. of AMERICAN BEE JOURNAL, one here and there finds the complaints of comb-foundation sagging when used in the brood-chamber, and a remedy is sought after in various ways. Friend N. N. Betsinger, even experimented to the amount of $1,000, and still without the desired result.

I have now used comb-foundation for three seasons, the last two seasons quite extensive, in fact every comb in my apiary built this season, was built on foundation. When I first used the foundation, I used them 9 inches deep, they stretched in the upper half, so that about 3 inches of its width was not used by the queen for breeding purposes the first year ; but the following spring I found to my dismay that every comb had a piece of drone-brood about the size of my open hand, which had to be cut out and replaced with a piece of worker comb, in order to fully control my drone supply for queen rearing.

I next used foundation 8 inches in width, with much the same result, after which I tried 7 inches and 6 inches in width, which gave more satisfactory results. The 7 inch strips would sag enough to find a row or more of drone-brood occasionally; but when used only 6 inches or less in width, and made of pure beeswax, the slight sagging did not prevent the queen from filling them in every instance with worker eggs. But now a new difficulty presented itself; below this narrow strip of foundation, the bees would frequently build drone-comb, and the much desired sheet of "every cell of worker size" seemed yet in the future. A remedy came at last. My frames hold a comb 12 inches square, and, finding I could not use foundation over 6 inches in depth successfully, I divided the comb space in the frame, in 2 equal parts, by placing a temporary center bar into it; I next fastened a piece of foundation 5¾ inches in width to the top and a similar piece below the center bar, and I had it. But what about that center bar? Doesn't it occupy space that ought to be filled with brood, &c? Easy, friends; I had my lesson in center bars 15 years ago. These center bars of which I write, are placed in the frame and fastened with one ¾ inch finishing nail in each end, the head of which slightly projects on the outside of the frame ends; and as soon as the comb is built, and sufficiently strong to support itself by the side fastenings, the nails are drawn out, a knife passed under the center bar, and the bar withdrawn. In one or two days the space occupied by the center bar is filled with worker comb. In this manner I have obtained over 300 combs, each a foot square, built solid without a single drone-cell; and have several hundred combs in the hives, that still have the center-bar left in, being filled with honey and deemed insufficiently strong, being built late in the season; but otherwise are all worker-comb. From these the center-bar will be removed when I make the usual spring examination.

Friend Godfrey, of Red Oak,' to whom I communicated my success with *temporary* center-bars, prepared several hundred frames in that way, and as far as heard from, with the best result.

Nearly two years ago I wrote to "Novice" on the subject of comb-foundation sagging, and suggested linen or some kind of thin cloth for a base, and submitted to him a piece of tracing linen, a remnant from a piece used by my father in 1842 for the same purpose; he soon thereafter sent me two specimens of foundation one apparently on the same tracing linen, which I had sent him, and the other on very thin muslin, or cheese cloth. On page 64, Vol. V. of *Gleanings*, Novice informs us that the bees would gnaw out the threads of the cloth, &c. Desiring, however, to test the stretching quality, I placed them in a frame and joined an 8 inch strip of common foundation below it. The common foundation sagged very much, but the foundation on the tracing linen, nor on the muslin sagged a particle, although the machine had broken part of the threads one way, but by turning it so that the broken threads run horizontaly it made no difference. Now Novice's bees would "get hold of a thread, and then they would tear the cloth all out," but mine behaved more respectfully, and built it out into full combs. What made the difference? Was it because I covered the ends of the threads by joining another piece of foundation?

While on the subject of comb-foundation, I will take the liberty of mentioning a case of misplaced credit: Root claims being the first to mention rolls for foundation machines, and foundation miles long; and even Prof. Cook commits an error when, on page 203 of his "Manual" he says: "It was first made by Herr Mehring, in 1847," and on page 204: "They" (the Germans) "used plates, not rollers, to stamp the wax," and again he says; "In 1868, the King Brothers, of New York, made and secured a patent on the first rollers." Even Novice used soap suds and slippery-elm bark to prevent the wax from adhering to the rolls; until a friend called his attention to starch.

Now the fact in the case is this, comb-foundation was made in Germany in 1842, by my father; they were made by a pair of engraved rollers, and starch was used to prevent the wax from adhering to the rollers. This I mention simply as a historic fact; and to corroborate my statement I refer the readers to page 35 of "The Bee-Keepers' Guide Book," which was issued in February 1868, and 10,000 copies circulated in little over a year; in it I give the following description, "among the earliest of which, probably Kretchmer's comb-foundation can be counted,—who invented and used them in Germany, I think as early as 1843. The device consisting of a strip of tracing linen, coated with a composition of white wax and starch, and upon which the comb-foundation or base of the cells were impressed, by passing it through a pair of engraved rollers." Here we have a description of engraved *rollers*, and *starch*; before Novice ever mentioned rollers, and before King Brothers applied for their patent, as a copy of the book was presented to them as soon as issued. And at the time the description was printed, the device was nearly a quarter century old. More anon by your servent

E. Kretchmer.

Coburg, Iowa, Nov. 9, 1878.

For the American Bee Journal.

Adulteration of Sweets again.

Mr. Root has successively given three motives for refusing to publish the petition against the adulteration of sweets. The first motive was that the petition was not of sufficient importance. The second, that we ought to let demand and supply regulate these questions, and lastly, the third (probably suggested by the manufacturer of glucose), is that the petition says that glucose contains sulphuric acid and lime. Mr. Root asserts that sulphuric acid and lime cannot exist in an active state in the same substance. The petition does not assert that both of these substances would be found in an active state; yet Prof. Kedzie has found both of them in several samples of glucose that he has analysed.

Mr. Payess, a well-known chemist of Paris, in his *Chimie Industrielle*, says that glucose is unwholesome on account of the sulphate of lime that it contains. Sulphate of lime, or plaster of Paris, is a compound of sulphuric acid and lime.

Charles Loudon Bloxan, professor of chemistry in King's College, London, in his "Chemistry Inorganic and Organic," says that it is easy to detect glucose in syrups and honey, on account of the sulphate of lime of the glucose.

Mr. Root admits that to manufacture glucose *an acid* is used. But he does not give the name of the acid, as if intending to give his readers the impression that some other acid, less unhealthy than sulphuric acid, could be used. He continues, speaking of the petition :

> "I presume the Davenport factory uses car loads of both the chalk and *the acid* in this chemical process, and this may have given rise to the *thoughtless statement* made above. *If* grape sugar (glucose) is made in so slovenly a manner as to contain articles prejudicial to health, the matter should, by all means, be taken in hand."

I admire that "if" and the "*thoughtless statement"!* of my opponent. My statement is based upon proofs given by the best chemists of France, England and the United States ; they all say that glucose always contains more or less of sulphate of lime. But Mr. Root simply expresses his doubts ! It is wonderful how foolish self esteem will make a man appear ! He continues :

> "The refiners of cane sugar use tons of blood and offal of the slaughter houses, as well as burnt bones; but our sugar of commerce contains none of these articles."

I am very far from being a chemist, yet I can see the difference between a mixture and a combination. In the manufacture of glucose there is a combination between corn starch, water and sulphuric acid. The result of every combination is a new compound: here it is GLUCOSE ! In the refining of sugar there is but a mechanical process, a mixture, not a combination. The blood is mixed with the syrup ; it coagulates, forming a kind of net-work through all the syrup. This net-work seizes and draws to the surface all the impurities of the liquid, while the burnt bones become a filter ! But the comparison of Mr. Root is valueless, since one of the processes is a chemical combination, the other a mechanical mixture.

One of the main arguments of Mr. Root, and reiterated by him, is that he can eat glucose without bad results !

Some years ago, while traveling in Switzerland, I noticed that the inhabitants of a great many villages of Valais, were *rickettish* and *goitered.* The scientists assert that such a deterioration in men comes from the use of the water that runs down the valleys, from the melting of the eternal snows which cover the tops of the mountains. Some medical authorities think that snow is not the culprit ; but that these rivulets, in their rapid course, run over ores of mercury. I freely drank of the same water, and I would have been laughed at had I said : "The scientists are mistaken ; this water is wholesome. I drank it for several days without being rickety." Such is the reasoning of Mr. Root ! As glucose did not poison him, the quantity of sulphate of lime being too small to act sensibly on his stomach, he concludes that glucose is harmless ! Drops of water, falling for years, will wear away stones, and a poison, like sulphate of lime, has a power of deterioration certain, although at first insensible, on the human organs, and on the organs of bees, too.

My opponent not only takes sides with the adulterators of honey, but he denies that cane sugar can be adulterated. Of course his reasonings are of the same kind and strength as those on glucose (see *Gleanings* for October). He puts a lump of sugar in a glass of water ; the water remains clear, therefore the sugar is pure. Such is the test of this editor ! This test is cheap and easy, but it proves nothing ! Will Mr. Root take a moment's rest, and read from the Chicago *Tribune* of October 7th, a statement made under oath by Mr. William T. Booth, of the firm of Booth & Edgar, sugar refiners of New York. The firm of Booth & Edgar enjoys, morally and financially, the highest commercial credit. Mr. Booth testified before Fernando Wood, chairman of the ways and means committee of Congress, Sept. 18. The inquest had for its object to ascertain if frauds existed in the refinery business.

The sugars imported are taxed at the custom houses according to their qualities, the most inferior qualities, such as the milado, paying only one and a half cents, while the refined pays five cents. It seems that some unprincipled refiners have found a cheap way to turn the inferior article into a good-looking article, and thus defraud the government of the greatest part of its duties. Mr. Booth says :

> "I tell you, sir, that adulteration of sugar does concern the committee of ways and means ; it concerns the board of health : it concerns everybody. Think of it ; by-and-by, when the people of this country have eaten enough of this sugar to become tin-lined, so that the stomach and bowels shall be coated with tin. What a pleasant thing it will be for us, fathers of families ! Our children won't cry any more ; there will be no more stomach-ache, for the stomach will be tin-lined.....
>
> "What has been the history of this race in adulteration in every business ? Why always the worst man wins. It is the man who will go farthest, who will sell himself body and soul to the d—l most completely, who wins in that race.....
>
> "A man came to me some time ago and said : 'Doctor, you are a fool !' I said : 'It may be ; but I am an honest one." Said he, 'You know about that glucose business, don't you ?' Said I, 'Do you think I am ignorant and don't know my business ? Do you think I don't know what is going on in all these refineries ?' 'Well,' said he, 'you are a fool' ! Why don't you go into the glucose business ? Your firm has had the reputation of making good, straight, honest sugars, and you can put glucose into them, and nobody will know about it !' 'But,' said I, 'when I die, I will die honest.' I have had men come to me, week after week, offering me this and that adulteration, and saying 'others use it. I sell car-load after car-load of it to this and that concern ; they are all using it in large quantities.' My position as a refiner has been such that I have been enabled to know just about what was going on in regard to this glucose business ; and I think we shall all hear more about it by-and-by ? No, sir ; this talk about the adulteration of sugars is *not* bosh."

Will my opponent be convinced by all the proofs that I have gathered ? I dare not hope it ; for none is more deaf, than those who refuse to hear !

Mr. Root says that we have State laws. Yes ! But they are dead letters ; they cannot be enforced.

Suppose that a dealer of New York sells pure glucose honey to a grocer of Hamilton. The law gives me the right of prosecuting the grocer for selling an adulterated article and the grocer will be fined, but the rascal who wholesaled or manufactured the adulterated article, will be free, on account of the difficulty and cost of prosecuting him in another State! The innocent sustains the loss while the guilty goes free.

It would be altogether different with a law made made by Congress, and the watching of food inspectors. Every transgressor would fear to be prosecuted and the adulteration would be stopped.

But to obtain such a law we need the help of every one; so get the petition signed. Not one of us should be without a copy; obtain signatures of all our neighbors, and return it filled with names. Send a postal card at once to get one.

Again, Mr. Root says:

> "It is a singular fact that although glucose is a liquid and grape sugar a solid, the latter contains a much larger per cent. of water, held by a curious law in chemistry, in a solid state. If we produce the grape sugar by adding more chalk, as friend Dadant suggests, I am afraid we should soon come to grief, for chalk is an insoluble compound, and the first lump of sugar our purchaser puts into his mouth would reveal the cheat. I know, by the letters received, that there are those so thoughtless as to suppose that it is possible to add chalk. Will those people please dissolve a lump of grape sugar in a little warm water and see if it does not all dissolve perfectly?"

After giving such proof of his knowledge in chemistry and common sense, the editor continues:

> "I might have published the article, it is true, and it may be my duty to give everybody a hearing, even should they send in a paper claiming that the moon was made of—chalk; but would it be profitable to occupy space thus?"

I answer, chalk is carbonate of lime. In the tank, where glucose is manufactured the lime of the chalk combines with sugar and forms other compounds. My answer is: Sugar will form with lime several compounds very soluble in water.

Liquid lime is also found naturally in the water of some springs, which, as soon as it comes in contact with air, deposits its lime on the objects on which it runs; in the sap of trees and plants, in whose ashes lime is found, etc.

Mr. Root believes too much in his own infallibility in bee-keeping, chemistry and other matters. What is not in accordance with his imagination is wrong; is nonsense and moonshine! And we, his readers, know that his imaginative power is very large!

I am not alone in thinking that Mr. Root's paper would be greatly enhanced in value if he desisted from his steady habit of expurgating from the bulk of the articles received everything he does not endorse and thus to pronounce judgment on every article published. Such as are now contained in *Gleanings*, to use the expression of one of his friends, have proved to be a simple medium for the advertising of wares of the editor, with an intermixing of mere boy-talk. CH. DADANT.

Hamilton, Ill.

For the American Bee Journal.

The Variableness of Queen Progeny.

FRIEND NEWMAN:—Of late I have been reading with more interest than usual, on the variableness of the queen progeny and the color of the Italian bees, the fixing of a standard of purity for the Italians, and light vs. dark Italians. On page 262, A. F. Moon says: "locality makes a difference in color." That is very true, but he says nothing about the season of the year. On page 268, S. D. McLean says: "the queen's abdomen should be bright yellow, tipped with black with or without the black points on the back." Jos. M. Brooks on page 273 calls for "Princesses, exact duplicates of their mother." Alva Reyonlds on page 278 A. B. J., "it is a well known, &c., black bees were pure blacks from the beginning, and reproduced themselves all alike, regardless of sex." But they are not parti-colored, and the Italians are, and that is where the trouble mostly lies. Now, I cannot see why a standard of purity for the Italian bees cannot be made, as well as the American standard of excellence for the poultry breeders to be governed by; but a scale of points would not be quite as easily determined as it is on fowls. Why should not bees be bred to a particular description as much as fowls or cattle? There is a variableness in all kines of stock I care not how pure or how carefully they are mated and bred. I should like to see a queen that will duplicate herself every time in her queen progeny for two generations. A queen that is of a clear light color, and can do it, would be worth $100.00 to any breeder. I think it can be done, and yet I doubt that it will be done because no bee-keeper will take the trouble to do it. If a queen duplicates herself in one-half her queen progeny I should be well satisfied, and one of the great secrets I feel sure, lies in the mating or drone influence, and to explain I will relate some experience in fowl breeding and the results of different mating.

My favorites have been light brahmas and buff and patridge cochins; the two first I kept for seven years, the latter for five years. My first brahmas and buff bred true to color and markings, but to put in new blood I purchased thorough-bred males of both kinds, but the chickens raised were anything but uniform. I had to breed back again, before I obtained any uniformity of feather or color.

A queen is as liable to vary in either her drone or queen progeny as a hen is in her pullets or cockerels.

I have kept the Italians for five years, and from the dark queens obtained when I made a cross, I have in the second and third generation raised as even-colored young queens as I did from the light-colored ones, but just as soon as I put in new blood I have had this experience over again; it can be controlled to a certain extent.

If you want the light colored, select the strongest and most productive light colored colony; from that raise drones, this is No. 1; then get a one or two-year-old light colored queen to raise queens from, this is No. 2. Mate the young queens with the best light colored drones from No. 1; test them for color and strength of both drone and worker progeny. Select two more colonies from the light colored young queens, regardless of the color of drones ; we will call this No. 3 ; and the one with light colored drones No. 4. Start cells from No. 3, and mate the queens with drones from No. 1. Start cells from No. 1, and mate with drones from No. 4. Start cells from No. 4 and mate with drones from same hive. This is not in-and-in breeding ; the queens from No. 4, are only half sisters to No. 4 drones, the drone sire having no influence over the drone progeny and by breeding in-and-in and selecting carefully, you will not only know what you have, but will positively establish any particular type that you wish. By selecting the strongest working colonies for breeding, and dispatching those that are weak and poor honey gatherers you will establish a type, and will lose no strength.

A standard, close and strict, will not make bees breed to a particular color or size any more than the standard of excellence will prevent black necks on the light brahmas or yellow on white leghorns ! Any thoroughbred bird or animal may be bred regardless of selection, and vary, without being impure —bees not excepted. H. L. JEFFREY.

Woodbury, Conn.

Our Letter Box.

Hillsboro, O., Oct. 11, 1878.

We had 57 colonies in the fall of 1877 ; lost none during winter ; lost 1 in the summer ; have now 71 ; sold 1, and had 3 new swarms go off. Wintered out doors, 13 packed in leaves, all wintered well. I have taken 2,100 lbs. of comb honey. I never used the extractor. We sell our honey at 16 and 17 cents wholesale. We use mostly 4 lb. boxes. We have no Italians.

THOS. H. DICK & BRO.

Henry, Ill., Nov. 9, 1878.

I have obtained 2,000 lbs. of white clover and basswood honey, besides 1,500 lbs. of mixed honey this season, from 170 colonies in the spring (now 200). Does oak bloom, timothy, hemp and aspen produce honey ? All in this section like the AMERICAN BEE JOURNAL and wish it success.

OTTO HALBLEIB.

[The aspen yields some honey ; some of the others named give pollen, but little, if any honey.—ED.]

East Berkshire, Vt., Sept. 18, 1878.

DEAR EDITOR:—Being interested in bees and honey, I desire to inquire if something cannot be done by County and State Agricultural Societies to advance bee-keeping interests by way of offering a subscription to the AMERICAN BEE JOURNAL for the best display of honey ; Italian queens and implements might also be offered. Two years ago, there were only two exhibitors, of honey. At our State Fair this year, there were six. So you see scientific bee-keeping is on the rise. We have no Bee-Keepers' Society in our County (Franklin) yet, but think one may be organized this winter. The season has been very good since June 15th, but the month of May was very poor, so much so, that I had to feed to keep some of my bees from starving ; fruit blossoms were of no account. Have averaged about 70 lbs. of comb honey per colony and doubled my number of colonies.

F. W. COMINGS.

[Some of the managers of Fairs have already given a year's subscriptions to THE AMERICAN BEE JOURNAL as a premium, and if bee-keepers in each locality would write to the Managers of the Agricultural Societies in their locality, suggesting such a plan of proceedure, they would in nearly all cases be glad to offer such a premium.—ED.]

Claypool, Ky., Oct. 7, 1878.

DEAR EDITOR:—The past season has been a poor honey season with us. The spring was favorable up to the last of May when it set in cold and wet, continuing so for about a month. On this account our white clover crop was a total failure. Bees gathered no surplus from June 1st up to about the middle of August. From the 20th of Aug. till Oct. 1st, we had a moderate flow of honey, enabling our bees to go into winter quarters in good condition.

Below is a statement of our seasons operations :

Apiary	Dr.
To 43 Colonies in spring @ $10. each	$430.00
" Apiarian supplies on hand	50.00
" Apiarian supplies for season	46.00
Total	$526.00
Apiary	Cr.
By 65 Colonies in fall @ $8. each	$520.00
" Apiarian supplies on hand	50.00
" 50 empty hives on hand @ $1	50.00
" Bees and hives sold	70.75
" 1,200 lbs honey @ 10c. per lb	120.00
" 30 lbs. wax @ 20c. per lb	6.00
Total	$816.75
	526.00
Balance in favor of Cr.	$290.75

JAMES ERWIN.

Mt. Joy, Pa., Oct. 17, 1878.

In answer to a question in the BEE JOURNAL for Oct. I would say, that bees can get honey from red clover, if the weather is of the right kind. If there be no rain for a month before its blooming, the clover heads will not get so long, and the bees can reach the nectar. The past season has been a poor one ; May and June was wet but about July 18th, when the second crop of red clover bloomed after being mowed, the bees worked on it with a will. I got from 40 to 50 lbs. of red clover honey from some of my colonies. There was nothing else, and had it not been for it my colonies would not have had enough to winter on. The black bees gathered but little from red clover, and are now short of honey for winter. Alsike clover is as good as red clover, for feeding purposes—perhaps better. J. F. HERSHEY.

Brandywine Summit, Pa., Nov. 14, '78.

"I received seven first-premiums and diplomas at the Delaware County Fair, for having the finest display of honey, bees, bee-hives and apiarian implements."

J. T. WILLIAMSON.

Philadelphia, Pa., Nov. 11, 1878.

Nice comb honey is selling here at 25 cents per pound. It is sad to see the amount of bottled honey (so called), which I suppose contains only 40 per cent of honey, and one I sampled contained no honey at all. Should I find time I shall put a few of the samples found in commerce to a test.

W. B. RUSH.

Limerick, Ill., Sept. 9, 1878.

A woman living across the corner from here, had a swarm of bees put into a common box 11 years ago. They swarmed every year since, and gave some surplus. In 1877 they gave 4 swarms, and one 10 lb. box of honey. In 1876 3 swarms and two 10 lb. boxes of honey. One other year it gave 3 swarms, and then she sold it to me for $6.25. It gave me 2 swarms this year and is good for 20 lbs. of honey. The first swarms generally sold for $5.00, without a box, the buyer taking them home at night. She has been for years successful in wintering; she leaves and empty honey box on top; when frost gathers in it, she drys it; said hive stood on a bench one foot high, winter and summer, in a three sided shed opened to the South; the front board of the hive being 2¼ inches shorter than the rest, making the entrance the full width of the hive and 2¼ inches deep. This swarm has paid for itself several times.

E. PICKUP.

Dundee, Ill., Oct. 7, 1878.

The spring of 1878 opened early with us. We put our bees out on March 4th. They soon began to carry in pollen, and rapidly increased in brood, and by the time fruit trees bloomed they were ready for work. Then cold rains came, and frost, and as a result they barely got enough to live on. A part of May was quite warm, and on May 11th in the afternoon, the first swarm issued and on the following morning the second. These I was obliged to feed. White clover came on about the middle of June, and the bees were again ready for business. We took 1,200 lbs. of extracted honey and 65 lbs. of comb. The average from each colony was 70 lbs. I increased mostly by natural swarming. We have 42 colonies, one-half of which belong to me. As I have all the care of them; it will take all my time next summer. I owe nearly all my knowledge to the AMERICAN BEE JOURNAL. We wish it prosperity.

FAYETTE PERRY.

Chattanooga, Tenn., Nov. 6, 1878.

FRIEND NEWMAN.—I see that I have been appointed a Vice President of the National Bee-Keepers' Association. This is a compliment entirely unsought by me, nevertheless it is appreciated. I take pleasure in forwarding to you $1.00 which I believe is the initiation fee? Please enroll me. If the fee is not right I'll make it so. I have never been able to attend the meetings of the Association, and do not see any prospect ahead for doing so, but I will take great pleasure in co-operating with the faternity for the general good of the art and trade. Please accept of my hearty congratulations upon the manner of the Association's selection of you for President. You are undoubtedly the man that can serve them best.

S. C. DODGE.

[Thanks, friend Dodge, for congratulations, but more for the expressions of determination to co-operate for the good of producers. The Association will come nearer to you soon, we expect, and then we shall be glad with your presence, if you cannot come to the next meeting at Chicago. We hope you will try to do so.—ED.]

Wilmington, N. C., Nov. 18, 1878.

FRIEND NEWMAN:—I see by your valuable paper that I have the honor to be elected one of the Vice Presidents. I assure you no one feels more deeply interested in the subject of bees than myself, and whatever I can do to further the interests of apiculture, you may rest assured I will gladly undertake.

R. C. TAYLOR.

[Yes, friend Taylor, your interest in bees, and busines-like habits procured your appointment. North Carolina is a good State, and contains many bees, but exceedingly few apiarists! The work of procuring the adoption of scientific principles in your State lies before you. Neighborhood bee-talks; and County and State Conventions loom up as the result of your labors! Lo! your State is ripe for the harvest. Buckle on the armor and victory is yours.—ED.]

Medford, Minn., Nov. 16, 1878.

The results of the year have been poor; the fall crop was fair, and helped to fill up the hives so they are in good condition for wintering. My crop was a few pounds less than one ton. Nearly 1,600 lbs. of extracted and 385 lbs. of box honey. I comenced the season with 41 colonies and increased to 56.

J. E. CADY.

Harrisonville, Mo., Nov. 16, 1878.

The spring of 1878 opened early, and my 50 colonies of bees came through all right. But during May and June they stored but little honey, on account of excessive rains. July was rather dry but there was much honey-dew on the hickory, and bees stored it fast, soon making their hives heavy. August with occassional showers, maturing vegetation, gave promise of a bountiful yield of honey in Sept.—usually the great honey storing month with us. But September was dry, and this with early biting frosts about the middle of the month, ruined the honey prospects; so that I extracted only 20 lbs. on an average from my 90 colonies; but my bees are all in good condition for winter. Buckwheat yielded no honey this season. Honey-dew and spanish needle were our main source.

LEE EMRICK.

Conventions.

The National Convention.

The following is the gist of the correspondence omitted, in the report of this Convention as given last month :

Statistics.

Rev. A. H. Hart, Appleton, Wis., says : "According to the best information I have been able to obtain, the product of this State is 850,000 lbs. of honey, and 8,250 lbs. of wax."

W. M. Kellogg, Oquawka, Ill., says : "The No. of members in the 'Western Ill., and Eastern Iowa Association,' is 79. No. of colonies of bees kept by its members May 1st, 1878, was 3,989. No. of pounds of honey gathered in 1877, was 144,000."

D. D. Palmer, New Boston, Ill., says he estimates that "in the State of Illinois there are 500 persons keeping bees ; they have about 14,000 colonies, from which they receive about 500,000 lbs. of honey and 70,000 lbs. of wax."

John H. Keippart, Columbus, O., promises information soon.

Gen. LeDuc gives, as the "probable amount of honey produced in the United States, forty-five millions of pounds. In Kansas in 1872 the assessors reported 14,845 colonies of bees, with a yield of 133,384 lbs. of honey, or only 9 1-10 lbs to the colony."

Rev. M. Mahin, D.D., Logansport, Ind., writes : "I estimate the number of colonies in the State of Indiana to be about 570,000—yielding less than 25 lbs. per colony, the honey production of the State being 14,250,000 lbs. At 15c. per lb. this would amount to $2,137,500."

J. M. Shuck, Des Moines, Iowa, says : "The honey interest in our State is a large one, and should be properly organized, and if we had been blessed with county organizations or societies for the propagation of our interests, I believe a fine honey report from Iowa would have been promptly furnished."

New Comb Foundation and Machine.

Mrs. Frances Dunham, DePere, Wis., sent samples of her foundation, made upon a machine of her own invention and said : "I do not claim anything for it, only hope it will be an improvement. I beg you to judge the product, not the machine, which I do not consider perfect in working ; but expect my new machine to be so, and also am going to have the cells a little deeper, though of the same round form. I have not experimented with it at all in the hive, with the exceptions of the imperfect frame sent you, which I placed for my own gratification in the center of one of my strongest colonies, in the hot weather of July ; it was filled from top to bottom bar, pressed into place at the bottom. I have applied for a patent, not to make the price of foundation or machines higher, but because I hope to be allowed to benefit by what has cost me much thought, although I am 'only a woman.'"

Standard of Purity.

R. M. Argo, Lowell, Ky., writes : "I expect our National Convention, shortly to meet in New York, will be called upon to establish a standard of purity for Italian queens. I am in favor of some such standard if it can be made, but if they should undertake it at the next convention I fear they will find it rather a herculean task, as hardly any five or six prominent bee-men of long experience agree on the same test. Also, all who have imported queens direct from Italy know very well that they are several shades darker and that the bright color is bred in this country and does not come till the second or third generation. If the convention should establish a standard it will be properly called the American standard of purity of the Italian queen bees, and then when queens are imported by those who had never imported before, and their color is far below the standard of purity, what will they say ? Will they not say our standard is defective or their queens are hybrids ? Had we not better first settle the question whether there are hybrids in Italy, as I believe there are, and if it is a fact that there are hybrids in Italy, we will then be far better able to establish a standard of purity."

Bees in Italy.

Mr. C. J. Quinby, who had just returned from Europe being called upon by the President for a speech, said : "That he had visited nearly all the principal bee-gardens and queen-breeders of Northern Italy and was surprised to find their bees so black ; they were generally three-banded, but one had to look closely to see the bands. He had also thoroughly inspected all the apiarian displays at the great exhibition and pronounced them very inferior when compared with our own appliances for manipulating the bees and their products. He pronounced our 'American Italian bees' decidedly superior in all respects to anything he saw in Europe."

Bee-Keeping in California.

The settlement of California by white people has been so recent, and the peculiarities of its flora so different from most other parts of the world, that the introduction of many plants and animals common elsewhere but not indigenous here, has occurred within the memory of men of this generation, or the one preceding. While in other countries the knowledge and use of certain plants and animals extends back of civilized history, and in the United States, east of the Mississippi river, no exact date can be assigned to their introduction ; in California most of the cereals, the fruits, the domestic animals, and the enemies and diseases that attack them, can be traced to the exact date of their introduction, and in most instances the importor can be named.

The first settlers, in 1760, were the catholic missionaries who did most remarkable work in civilizing the Indians and introducing the products and appliances of civlization.

But among the many things brought by them, there is no record of the honey-bee, nor did any of the Spanish native residents of California know anything of bees or honey until after the discovery of gold and the influx of "Americans," as people coming from our Eastern States were generally called.

The following letter gives the most reliable information I can obtain in regard to the first importation of bees. It is quoted from Harbison's "Bee-keepers' Directory; or, the Theory and Practice of Bee-culture," published in 1861. Mr. Harbison has been and is the most extensive apiarist on the Pacific coast; the inventor of a hive and section box for comb honey very generally in use here; has been constantly in the business for over thirty years and is generally known among bee-men throughout the United States.

A large part of this article is from his book or his personal experience since its publication. The letter is as follows:

San Jose, Jan. 11th, 1860.

"The first bees introduced into California was in March, 1853. Mr. Shelton purchased a lot, consisting of 12 colonies of some person, to me unknown, at Aspinwall. The party who left New York became disgusted with the experiment and returned. All of the hives contained bees when landed in San Francisco, but finally dwindled down to one. They were brought to San Jose and threw off 3 swarms the first season. Mr. Shelton was killed soon after his arrival, by the explosion of the ill-fated steamer Jenny Lind.

"In December 2 of the colonies were sold at auction to settle up his estate, and were bought by Major James W. Patrick, at $105 and $110 respectfully.

"Mr. Wm. Buck imported the second lot in November, 1855. He left New York with 36 colonies and saved 18. I purchased a half interest in them. I also, in the fall of 1854, bought 1 colony of Major Patrick, from which I had an increase of 2. Mr. Buck returned to the East immediately and returned in February, 1856, with 42 colonies of which he saved but 7. Our increase in 1856 from the 28 colonies was 73; we also had about 400 lbs. of honey in boxes, which we sold at from $1.50 to $2.00 per pound.

"Mr. Wm. Briggs of San Jose brought out in the spring of 1856, 1 colony from which he had an increase of 7 or 8 colonies the following summer.

"The above were the only importations I know of prior to the spring of 1857. There are in this county about 1,000 colonies."

F. G. APPLETON.

In November, 1857, J. S. Harbison started from Lawrence Co., Penn., for California, with 67 colonies of black bees. After a journey of 5,900 miles in 27 days, during which time the bees were allowed to fly out once, at Aspinwall, they arrived at Sacramento, California, reduced in number to 62 but as some of these were weak, they were united with others, reducing the number to 50. Some of these were sold, and the remainder, 34 in number, increased the following spring to 120 and were all sold but 6. The price realized was $100 per colony.

In December, 1858, Mr. Harbison started again from New York with 114 colonies, 68 from Centralia, Ill., and 46 from Lawrence Co., Penn., and arrived in California Jan. 1, 1859, with 103 colonies living, but owing to the season and unfavorable weather these became reduced to 62. From these and the 6 previously remaining, during the spring of 1859, the number was increased to 422 by "dividing."

Of these, Mr. Edwin Sherman took to Los Angeles county, in December, 1859, 24 colonies, which were sold and distributed in that and the adjoining counties, and their progeny furnished most of the wild bees of Southern California, as well as the basis of the recent increase in some localities.

In the fall of 1859 also, Mr. J. Gridley brought 4 colonies across the plains in a spring wagon, allowing them to fly out occasionally in the afternoon, and they arrived at Sacremento in good condition.

The success of these ventures induced other parties to import bees in large numbers, as many as 6,000 or 7,000 colonies being brought from New York to California in 1859 and 1860, but unfortunately "foul brood" was introduced with some of them and rapidly spread till the total destruction of bee-keeping was threatened and many persons lost heavily, the price rapidly declining from $100 per colony, till there was no sale.

Most of the apiarists had been located in the Sacramento and other large valleys, and the great floods of 1861–2, which destroyed so much property, swept away many apiaries; only a few, located in the mountains, escaped.

For several years bee-keeping was in very little favor, but little honey was put on the market and but few cared to keep bees for a business. In the southern counties that have since proved to be the best locality for bee-keeping in California, and taking into consideration all conditions of climate and flora productions, perhaps the best in the world, it had not then become a business; the few colonies that were kept on the ranches receiving very little attention. I have in my possession 2 of the original colonies brought down by Sherman, and sold to Col. C. J. Couts of San Diego county, and kept on his place until I acquired them in 1875. They still contained bees, but no attention had been paid to them, the swarms sometimes being hived, but allowed to run away and fill the trees of the mountains a few miles distant.

In 1860, Mr. A. J. Bigelow of Sacramento, left New York with 113 colonies with Italian queens raised by Mr. S. B. Parsons, of Flushing, L. I., and reached California with 111 in good condition. These were the first Italians brought to the State. In 1875 Mr. J. S. Harbison imported 20 carefully selected Italian queens, and from these two importations have been bred most of the hybrid bees now generally kept here.

After several years depression in the bee business, Mr. Harbison who had bred up a stock from the few that escaped foul brood and the inundation, heard that 3 colonies brought into San Diego county from Los Angeles, had done remarkably well, and determined to try establishing an apiary there. He and his partner, Mr. R. G. Clark, arrived in San Diego in November, 1869, with 110 colonies. The success of these both in increasing and in gathering honey was so encouraging that they brought 154 more in 1871, and during several succeeding years Mr. Harbison brought down all his colonies, amounting to 1,000.

In 1870 these gentlemen commenced selling to other parties, and as it seemed a very profitable business, a great many persons engaged in it, until in the spring of 1876 the number of colonies of bees in improved hives in San Diego county alone, as returned to the assessor, was over 23,000.

The other counties of southern California also went largely into the business, Los Angeles county having 24,000, and San Bernardino, 6,000.

In 1869 one case of comb honey was shipped from Sacramento to Chicago, in the first car of fruit ever sent overland. In 1873 Messrs. Clark & Harbison shipped a full car load of 10 tons to Chicago. Previous to that, the local markets of California had consumed all produced at a good price, but the amount had then increased so much as to require a market elsewhere. Since, California honey has been shipped to all the markets of the Eastern States, and is known and generally liked for its color and flavor.

During the season of 1876, about 3,000,000 lbs. of honey were produced in California, of which San Diego county furnished one-third. Los Angeles and San Bernardino counties combined another third, and the rest of the State the remainder. This was the largest amount hitherto produced. It is too early yet to estimate the amount for 1878, but there will probably be less comb-honey, and more liquid honey than in 1876. In 1877 several causes combined to produce a disastrous result for the bee interest.

The winter or rainy season, was extremely dry; the spring was very cold and backward and the early summer exceedingly hot. The supply of honey was cut off, very few colonies gathered enough for their own use. The result was a very great mortality from starvation, amounting to one-half in San Diego, fourth-fifths in Los Angeles. Some owners saved their bees by feeding; others a part by distributing equally the stores among as many colonies as it would carry through, but no surplus honey was made.

The present season has so far been a good one, the spring was backward and cold, but the summer has been very favorable and bees have generally gathered more honey during July than in any previous year, but the great reduction in their numbers during the past year, will restrict the aggregate crop, though the average per hive will be large.

The number of colonies of bees in the southern counties of California, which embraces the greater portion of those in the State was estimated about 30,000 in March, 1878, and the increase this year will probably be fifty per cent. San Diego county has principally engaged in producing comb-honey while the others get liquid honey by extracting.

Southern California is peculiarly adapted to bee raising and honey producing for several reasons. The equable nature of the climate is a great advantage. The temperature seldom falls as low as the freezing point, and even frosts are uncommon. During the winter or rainy season, bees require no shelter, and can fly out more than one-half the time, indeed most of the time can find food. The summer is entirely dry, no rain, hail, or thunder storms interfere with the labors or breeding of the bees, or cause disease among them.

Feed is obtained during nine or ten months in the year and surplus honey gathered for four or five. There is a very large area of rough mountainous country, with small valleys, furnishing sites for small farms and apiaries while the mountains are covered with honey producing plants peculiar to this region, and never likely to be disturbed in their luxuriant growth. Among these are the following:

Manzanita, blossoming in February; alfilerea, in March; black sage, in April; wild alfalfa, in May; white sage, in June; California sumac, in July; greasewood, golden rod and blue curls, in the fall.

During a great part of the honey season the nights are foggy and damp and the days bright, warm and still, the most favorable conditions for bees to work and store honey.

In the work published by Mr. Harbison quoted from above, he says: "In California the quantity of honey gathered by a single hive in a year is greater, and the quality better than is usually found in any other country. Owing to the peculiarly dry climate the honey is more dense, weighing nearly one pound more per gallon than that usually made in the Atlantic States, in consequence of which it will keep good for years, and can be transported to the Atlantic cities and to Europe in prime order and at a profit to the producer. And the time is not distant when, if the business receives the attention it deserves, the export of honey and beeswax will be no inconsiderable item of revenue to the apiarist of the Pacific coast."

This was written nearly 20 years ago, and the writer has seen his prophecy abundantly fulfilled by the shipment of large quantities of honey from California to all parts of the world.

We labor under the disadvantages of distance from the great markets, the exhorbitantly oppressive freight charges of a railroad monopoly and some old fashioned customs; but we are making improvements in the spirit of the age, we are doing our part in opening up the markets of the world, and we hope to be able to get more reasonable rates of transportation.

While we do not wish to crowd out any one, we claim the right to place our product on the market in fair competition, trusting to its own merits to secure for us a reasonable compensation for our labors and investments.

Several of the counties of California have their bee-keepers' associations incorporated under the general law of the State, and they are doing much good in exchanging ideas and experiences and in combining for mutual interest in shipping, &c. Through their united action some salutary laws have been passed and some trade regulations established, and it is to be hoped that they and such associations—local, state, and national —will be warmly sustained and enabled to go on with their good work.

CHAS. J. FOX,
Pres. San Diego Bee-keepers' Association.

Italian Bees.

Bro. Bee-Keepers in the National Association assembled:

I know of no way to get at the above subject in a manner that will be more instructive to the inexperienced, than to simply give my experience with this race of bees. This experience will also explain my former writings upon the subject.

I began bee-keeping as a specialty in the spring of 1869. I began by purchasing 48 colonies ot black bees, and one Italian queen, for which I paid $8. From this one I reared others, though only a few, and consequently my experience was mostly with the blacks. I rapidly learned their ways, and at the same time some of the disagreeable ways of hybrids. I next purchased one more queen at $2.50, and was quite pleased with her and her's, for a time, but more cross-hybrids was the result. About these winters, bees in this part were dying to a great extent, in cellars, special houses, and on their summer stands alike. I noticed that the Italians withstood the disease much, yes, very much better than the blacks. I at once made up my mind to Italianize my apiary, and "done with it." I had about 40 colonies and I purchased a queen for every one of the 40 colonies, at $2.00 each. Now I had Italian bees, and an Italian apiary, and from that time I have wintered most of my colonies, while the blacks mostly died around me. But then came new trouble. I was producing mostly extracted honey, and these yellow jackets would not shake off the combs, but hang like "stick-tights." They would not work in sections till they had filled in too much honey below. Comb honey began to be the most profitable to produce, and I arranged for that, and horror of horrors! they could not build comb any where near equal to the black bees. Then I thought that the loud praises I had heard of them, was all "put on" for the gain in this traffic. Really indignant, I took up arms of ink against the fraud. No doubt many were caught by their beauty, and others carried on the deception for gain, but a few good, reliable bee-keeping friends still swore by the Italians, and I was induced to try them once more. I next bought 25 full colonies and some more queens, and at once I began to discover that I had a very different and superior race of bees to any I had ever owned or seen before, and also that they would go right up stairs and build more comb in the same length of time than the blacks would. That they were very much superior to the blacks, or my former Italians, as honey gathers (especially in the fall). I began disseminating their blood into my apiaries. In all my surplus honey of last year I found but one moth larva. This year in all the surplus from nearly 400 colonies, and most all comb honey, not one. The bees do not look like the former Italians I had had, or any I had ever seen, and now comes the best and most exceptional circumstance of all. The hybrids of these and black bees are just as good workers and amiable bees as the pure Italians. In one of my apiaries I still have a few of the old stock of Italians and the past summer their average yield was not to exceed one-third of that of the best colony. Producing honey—most of you know—has always been my favorite branch of apiculture. I must say that I am satisfied with my present stock, though "onward" shall ever be my motto, and I shall do my little might to still improve my bees by destroying the poorest and breeding from the best. JAMES HEDDON.

Dowagiac, Mich., Sept. 25. 1878.

Extracted Honey.

Mr. President and Members of the National Bee-keepers' Convention:

The theme allotted me by your Executive Committee, is one of no small importance to American apiculturists. Especially is this true at the present time, when the general shrinkage of values, incident to a return to specie payments, is constantly lessening the margin between the actual cost of our production and the price they will command in our fluctuating markets; yet it is one that has, hitherto, received too little attention. In composing this subject we have availed ourselves of facts and figures. Everything in fact that had either a direct or indirect bearing upon result, and we herewith submit our deductions in the premises. While they do not leave as large a margin for profit as we could desire, we feel that they are in accord with the facts in the case; and in submitting them for your consideration we court the fullest investigation of the positions herein assumed. Our only aim has been to correctly solve the problem, regardless of all other considerations.

One hundred colonies of bees are about all that can be profitably kept in one location, and will give one person full employment where the extractor is exclusively used for at least 150 days out of each year.

In the days of box-hives and black bees, before our late civil war, when gold was the basis of our currency, these 100 colonies were worth $500. At the present time, with Italian bees and movable frames, they will represent twice that amount, or $1,000. While in some isolated cases, bees may be purchased for less money. One hundred colonies arranged for the extractor with an extra set of combs are worth, or will command fully that sum. Suitable appliances for carrying on business will cost $500 more. This includes ground for a bee-yard, a bee or honey-house for storing honey in summer and protection of bees in winter, and all other necessary appurtenances. These two sums then will represent the investment. The interest, taxes, and insurance thereon, will amount to about 10 per cent., or $150; the labor required at $2.00 per day, will amount to $300 more, $450 in all. This much for the outlay. Now such an apiary will give an annual yield of 5,000 lbs. of extracted honey. But little increase of stock will be secured where the extractor is exclusively used—enough perhaps to cover losses in wintering. According to the above figuring the actual cost of producing extracted honey is 9 cents per pound.

In the foregoing calculation we have endeavored to avoid extremes, and thus obtain an averaged result.

There are localities where our apiary will produce a larger yield of honey, while in a great majority of cases a less amount will be secured. There are seasons when honey is very plentiful, and an averaged location will exceed 5,000 lbs.; yet in 3 years out of 4 the yield will bring it down to this average. Labor can be procured for less than $2.00 per day, but the man who possesses the skill and energy to successfully manage 100 colonies of bees would command more had his attention been directed to other fields of labor. Money is worth but 7 per cent. in many States, while here in the West it readily commands 10, and taxes and insurance will make the latter figure an average.

HERBERT A. BURCH.

South Haven, Mich.

Hints to Beginners.

In offering a few remarks upon bee-culture, I wish to state in the outset, that I shall not present anything especially new or instructive to very many of those present. But I have endeavored very briefly to indicate for the benefit of beginners, some of the principles. a knowledge of which I consider indispensable to success in this calling. I shall not give any particular details of the practice, but simply offer a few hints, such as seem to me most important.

A question which naturally arises when we observe the large proportion of failures among those who undertake bee-keeping, is as to the cause or causes. These failures may, I think, be accounted for very easily, by any thoughtful bee-keeper of much experience. The old opinion, which ought, by this time, to be entirely exploded, that bees will generally take care of themselves and bring us fabulous returns for little or no investment of capital or labor, is still a stumbling-block to prosperous bee-keeping. Added to this are the deliberate misrepresentations of unscrupulous dealers, whose advertisements are sure to mislead the uninformed.

None of us like to parade our failures, our "bad years," before the public, and consequently the reports in the papers generally show only the bright side, and remarkable yields. Ignorance of the business, then, is responsible for a large proportion of ill success.

What, then, is essential? A thorough knowledge of the business; plenty of application and hard work. Do not begin where the individual did who once wrote us that he had decided to pursue bee-keeping, and wanted to know the price of a pair of bees to begin with. I maintain that it is as important to serve an apprenticeship at this as at any trade or profession. Much general and useful information may be obtained by reading the best works and papers on the subject, but actual practice in an apiary is indispensible. Many persons are naturally unfit for the business, from carelessness and inaccuracy about their work. I know of no out-door pursuit where so much depends on the right thing being done at the right time and in the right way. A willingness to work hard and a determination to succeed are characteristics of the prosperous bee-keeper.

WHEN AND HOW TO START AN APIARY.

Avoid the common blunder of rushing into bee-keeping just after there have been one or two particularly good seasons. The results of a favorable year are generally very alluring to beginners. The fact is that an extra good yield is usually followed by a very moderate or poor one, and the reverse. So, if one wishes to increase the chances of success in his first venture, he had better begin directly after a poor season. Beginners should purchase but a small number of colonies at first, and increase as experience and success will warrant. Obtain the best that can be found even at a greater expense. It will often prove a gain before the season closes. Spring is the preferable time to purchase bees, and if they are transported a long distance, they will be benefitted by the shipment. Use some practical form of movable comb hive, as otherwise the best results can not be realized.

FEAR OF STINGS.

A very great hindrance to the practical handling of bees is the fear of stings. Every beginner should supply himself or herself with a bee-veil, which will protect the face. A prime necessity, also, is a bellows smoker. This mode of applying smoke for quieting bees is being adopted by nearly all bee-keepers, and is proving invaluable. The extractor for removing honey from the combs without injuring them is a very important implement. Comb-foundation for the brood-chamber is underestimated by many. I anticipate for it a place by the side of the leading inventions of the day.

I have barely mentioned some of the most necessary fixtures of a first-class apiary, without which success can be but limited. But do not make the common mistake of thinking that securing these appliances will ensure success. They are only aids, profitable when intelligently used.

ITALIAN BEES.

The merits of the Italian bee are thoroughly established among enlightened bee-keepers. I can not, at this time, enumerate their special points of superiority, but earnestly advise a careful trial of both Italians and natives, that each may determine for himself which are best adapted to a particular locality. The truth that should stand out most prominently is, that a large force will do a large amount of work, and every effort should be made to secure a large stock of working bees.

A piece of drone comb two inches square in the center of the brood-chamber, is a small thing, yet it is a space in which every 21 days 200 worker bees might be raised. This is not all. If it is located at the center of the cluster there will often be a useless number of drones reared for this season, which are not only useless, but being consumers, are an absolute disadvantage. The management necessary to secure a large working force, is at the very foundation of success and is borne in mind by every intelligent bee-keeper during the entire year. The difference between a poor and good queen may be sufficient to make the difference between the failure and prosperity of a colony. Many practical bee-keepers fail to attach importance enough to the selection of proper stock from which to rear queens.

The problem of successful wintering has

probably been more difficult to solve than any other question of bee management. It is by no means yet reduced to a formula, and is made a subject of careful study and experiment by our best bee-keepers.

SOURCES OF INFORMATION.

I hardly need say where the most modern works and journals giving instruction upon these topics may be found. Every agricultural paper of to-day gives more or less space to this growing branch of industry, besides those exclusively devoted to it; and no bee-keeper can afford not to keep pace with the best ideas, to be found therein.

I urge the organization and attendance of conventions, where the ripest experiences of each may be presented, and all be profited by their discussion. L. C. Root.

Scientific Bee-Keeping.

READ BEFORE THE SAGINAW FARMERS' CLUB BY DR. L. C. WHITING.

In no department of rural affairs has greater progress been made of late years than in bee-keeping, though but few comparatively have kept pace with the onward march.

Some kind of a movable comb hive is indispensable for the modern bee-keeper. This hive must combine cheapness of construction with facility in the management of the bees. A large number of the most practical apiarists have adopted some form of the Langstroth or Quinby hive. With either of these hives, a full knowledge of the condition of the bees can be obtained at any time. The best hives in use can be made by any one, as they are free from patents.

The kind of bees you get is of much less importance, as these can be changed at any time by changing the queens. One thing is important, that they be strong colonies, and "no others should be tolerated." All the profit of the apiary comes from the strong colonies. If honey is the object sought, very little or no increase should be allowed. If multiplication of colonies is desired, the most economical way is to raise your queens, and as soon as they commence to lay, make the increase by division, rather than by natural swarming. Provide each of the new colonies with a laying queen. Keep those you expect to gather honey, strong in numbers and build up the new ones with brood and bees as they can be spared. Increase as early in the season as possible. You can raise queens as soon as the drones make their appearence, and the colonies are strong in numbers. There are various ways of raising queens, but perhaps as good a way as any for a beginner, is to stimulate the most desirable colony. The bee is as much subject to improvement as any of the animal creation. Care should be taken to breed only from the most desirable colonies, by feeding them regularly every day, a little honey or sweetened water, until they swarm naturally, then divide the old colony into as many nuclei as there are queen-cells. When the queen is hatched and commences to lay, build up, by giving them combs of brood and bees from others. This can be repeated as often as any colony is strong enough to get the swarming fever. If the bees are not strong enough to swarm, a few queens can be raised by placing one or two frames of brood with the bees adhering, to one side of the hive, separating them from the rest by a division board.

Care should be taken to make this division perfect, so that bees cannot pass from one side to the other, also to see that the queen is not on either of the combs, as well as to know that there are eggs and young brood in the combs. A separate opening for each apartment must be had. In ten days queen-cells will be found and can be placed in nuclei, for hatching. A careful bee-keeper will keep on hand a few young vigorous queens to replace any old or unprolific ones.

Which are best, the Italian are black bees? I prefer the Italians for the following reasons: They are less likely to sting while being handled. The queens are more easily found, seldom or never hiding; they are moth proof; they protect their stores more successfully from robber bees, and gather more honey in a poor season.

The black bees will store as much honey in a good season and are more easily induced to work in the boxes. The greatest danger of loss is in wintering bees. Seek security from this by having all colonies strong and well provided with good sealed honey. Sufficient air to carry off the moisture must be admitted to the hive, care being taken to have no draught through the cluster of bees. If wintered out of doors they should be examined often to see that the entrance is not closed. If all air is excluded they will quickly smother; 30 to 35 lbs. of honey will be required for out of doors and 10 lbs. less if wintered in the cellar. A good quilt or chaff covering is considered desirable over the frames, to let the moisture escape without making a draught of air through the cluster. Cover with the cap of the hive so as to keep perfectly dry. In the fall unite all weak colonies, and thereby save bees and honey. A small colony will require as much honey as a large one, and is very likely to be lost.

The market demands comb honey in small frames or sections, so that it can be sold without breaking bulk; extracted honey by the pound or gallon. The demand for the extracted honey, is increasing, as the people are fast becoming aware of its cheapness and purity.

The best time to handle bees is in the middle of the day when the old bees are out gathering honey. There are then fewer bees in the way and the young bees are not inclined to be cross. If possible avoid opening hives when robber bees are troublesome. The most desirable location for an apiary is where blossoms are found in the greatest variety and abundance. In this part of the State white clover and basswood furnish the main crop, buckwheat and fall flowers furnishing an abundance for their winter stores.

With frame hives and comb foundation the amount of drone comb can be regulated. The foundation with small wire worked into it, is preferable as it will not sag. Use comb foundation only in the body of the hive. The starters in the boxes, should be of clean white comb, fastened with white glue.

The most profitable time to feed is in the spring and summer when blossoms fail. Feeding induces the queen to lay, and the bees will raise the brood for the coming harvest. The more bees, the more honey.

Care should be taken during the season that the queen has room in which to deposit her eggs. For this purpose the extractor should be used freely. It will be found a gain, even if you have to feed the honey back again to keep the queen laying. As it is desirable that there should be but little unoccupied room, the hive should be supplied with a movable division board.

As the colony increases in size, the board can be easily moved. The tools required for a beginner are first a good manual. A. J. Cook's, of the agricultural college of Lansing, is the latest and best; a honey extractor; a Bingham smoker; a Bingham & Hetherington honey knife; a bee-veil, and tools enough to put hives and boxes together.

The old secret of handling bees with safety, was to alarm them in some way so that they would fill themselves with honey, when they are peaceable, like a natural swarm in swarming time. Bee-keepers use smoke for this purpose. If you have but a few colonies, a small stick of half-rotted wood lighted so that the smoke can be blown amongst them will do, but a good Bingham smoker will save much time; don't fail to get the largest size. One of our best bee-keepers says that the great secret in successful bee-keeping consists in knowing how to keep all colonies strong. To this might be added: Doing the right thing at the right time. Don't cherish the idea that you can keep bees without work. Don't be alarmed if you get stung; pull out the sting as quickly as possible, blow a little smoke over the place and go ahead, you will soon get used to it.

One very important item is to take the AMERICAN BEE JOURNAL. It is worthy of the patronage of every bee-keeper in the land. With these few hints permit me to close, hoping they may assist the beginner in apiculture.

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☞ The Central Illinois Bee-Keepers' Association held its semi-annual meeting Oct. 31st, 1878, at Hillsboro, Ill.

Dr. Hobson, of Irving, being called upon, addressed the Convention, showing the necessity of feeding bees during the wet and cold weather in spring, and severe drouths of summer. They require it as much as any other stock, if strong colonies are desired. He thought many hives too large; 1,800 cubic inches are sufficient for brood chamber. The best place for the surplus honey was over the frames. This season was not favorable; from 22 colonies he got but 1,200 lbs.

Mr. Welcher had 65 colonies in spring, and increased to 145. From these he obtained 7200 lbs. extracted, and 1800 lbs. comb honey.

Dr. Allen, of Greenville, said bees had been almost a failure this year with him. He was successful in wintering bees by covering completely with hay or straw.

Mr. J. H. Shimer, the President, had 40 colonies in the spring; they did nothing till August, when he moved them 12 miles into the country. In Oct. they had stored 2,000 lbs. in 1-lb. sections, which sold readily in St. Louis at 20 cents per lb.

Annual meeting will be held at Hillsboro, Ill., April 1st. WM. J. JACKSON, *Sec.*

◆

HONEY SHOW.—Mr. M. W. Carrott made a very fine honey exhibit at the Quincy, Ill., Fair. The *Western Agriculturist* remarks that Mr. C. is "a great admirer of bees, and as successful as the most enthusiastic amateur could wish. His hives are of modern construction. Commencing with common bees, he Italianized them by giving them tested Italian queens; his colonies are now strong, and have been active workers, having filled the prize boxes with the finest honey; he has also taken large quantities from the frames with the honey extractor."

Local Convention Directory.

1878. *Time and Place of Meeting.*

Dec. 3.—Montcalm County, at Carson City, Mich.
4.—Michigan State, at Grand Rapids, Mich.
17,—Northwestern Illinois, at Shirland, Ill.

1879.
Feb. 14.—South-Western Ohio, at Lebanon, O.
April 1,—Central Illinois, at Hillsboro, Ill.
May 6.—Albany County, N. Y., at Clarksville, N. Y.
6.—Central Kentucky, at Lexington, Ky.
28.—North-Eastern Wisconsin, at Hartford, Wis.
Oct. 21.—National Convention, at Chicago, Ill.

☞ In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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☞ New subscribers for next year will receive the December number free, as long as it lasts. So make up clubs at once. Our clubbing rates with other papers for next year will be as follows:

CLUBBING LIST.

We supply the AMERICAN BEE JOURNAL and any of the following periodicals at the prices quoted in the last column of figures. The first column gives the regular price of both.

Gleanings in Bee Culture	$2 50	$2 25
Bee-Keepers' Magazine	3 00	2 50
The three Bee papers of U. S	4 00	3 25
British Bee Journal	4 00	3 50
All four—British and American	6 50	5 00
American Poultry Journal	2 75	2 50
American Agriculturist	3 00	2 50
Ohio Farmer	3 50	2 85
Moore's Rural New Yorker	4 15	3 65
National Live Stock Journal	3 65	3 15
Prairie Farmer	3 50	3 15
Scientific American	4 90	4 35
Western Rural	3 50	3 15
Voice of Masonry	4 50	3 75

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☞ If not paid strictly in advance, TWO DOLLARS per annum will charged in all cases.

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☞ A line will contain about eight words; fourteen lines will occupy an inch of space. Advertisements must be received by the 20th, to insure insertion.

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THOMAS G. NEWMAN & SON,
974 West Madison St. CHICAGO, ILL.

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We send the JOURNAL until an order for discontinuance is received and all arrearages are paid.

We do not send goods by C. O. D., unless sufficient money is sent with the order to pay express charges both ways, in case not taken from express office.

In consequence of the dearth of small currency in the country, we will receive either **1, 2 or 3 cent stamps,** for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additions can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us **SIX** subscribers to THE AMERICAN BEE JOURNAL with **$9.** Premium Queens will in every case be tested, but not sent till after July 1st.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce, Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apiary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at $2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Our answer to all who ask credit is this: We sell on **small** margins, and cannot afford to take the risks of doing a credit business. If we did such a business, we should be obliged to add at least 10 to 20 per cent. more to our prices, to make up for those who would never pay, and to pay the expenses of keeping book-accounts with our customers—this we know our **Cash** customers would not think to their advantage.—This rule we must make general in order not to do injustice to any one. The cash system gives all the advantage to cash customers, while the credit system works to their injury. In justice to all we must therefore require **Cash with the order.**

☞ We shall give more of the statistical table next month. Those who have not reported yet should do so at once, and include the proceeds of the whole season.

◆

☞ The National Convention ordered to be printed 1000 copies of the address to "Honey Producers and Consumers," found on page 394. Bee-keepers were expected to get them, and personally ask the editors of the local papers to publish them. They are now ready and will be sent to those desiring them, either from this office, or the Secretary, Dr. Parmly, of New York.

◆

☞ We have received a copy of "The Amateur's Hand-book of Practical Information for the Work-shop and the Laboratory." It is a ten cent book containing information on almost every subject, and is published by the Industrial Publication Co., New York.

◆

INSECTS ON FLOWERS AND HOUSE-PLANTS, AND HOW TO DISTROY THEM—Is the title of a valuable little book. It tells how to fertilize and stimulate plants, the experiences of cultivators in keeping their plants healthy. Among the topics are these: "*Red Spider*," "*Aphis*," "*Green Fly*," "*Worms in Pots*," "*Rose Slugs*," "*Rose Bugs*," "*Snails*," "*Caterpillars*," "*How to Destroy Insects on Garden Fruit Trees and Vegetables*," etc., etc. It is exceedingly valuable also to Housekeepers, as it tells all about "*Ants*" and all *House Bugs*. It will be sent to any address for 30 cents, by mail, postpaid, by the publisher, Henry T. Williams, N. Y.

◆

☞ In writing to this office, please do not mix business matters up on the same sheet with articles for publication. It is very inconvenient. Write it on separate sheets, so that the business matter can go directly into the hands of the business manager, and that for publication to the editor—two different persons.

◆

A FARMER'S PAPER.—We ask attention to the card of *The Ohio Farmer*, of Cleveland, O., in this issue of our paper. It is one of the oldest and most valuable agricultural papers in the country. We club it with the BEE JOURNAL for $2.85.

Honey Markets.

CHICAGO.

HONEY.—White clover, put up in single-comb boxes, in fair demand. Prices paid for such, 11@13c. When more than 1 comb in a box, 10@11c. Dark, in the comb, slow sale at 8@10c. Extracted Honey, white, 7@8c.; dark, 6@7c.

BEESWAX.—Prime choice yellow, 23@25c; darker grades, 16@20c,

CINCINNATI.

COMB HONEY—In small boxes, 11@13c. Extracted, 1 ℔. jars, in shipping order, per doz., $2.50; per gross, $28.00. 2 ℔. jars, per doz,, $4.50; per gross, $50.00.

C. F. MUTH.

CALIFORNIA.

HONEY.—Our low figures for honey are opening up new markets, and in addition to European markets, we are selling extracted honey and wax for the Chinese and Australian markets. Receipts are small but market steady. San Diego county is estimated to produce one million pounds this year. Quotations are as follows: Comb, white, 9@11c; comb, dark to medium, 7@8c; extracted, 4¾@6c.

BEESWAX.—25@27c.

STEARNS & SMITH, 423 Front St., San Francisco, Cal.

NEW YORK.

QUOTATIONS.—Best fancy white comb honey, new, 12@15c; extracted, new, 7@8c; buckwheat comb honey, 10@12c; beeswax, prime, 27½c.

H. K. & F. B. THURBER & CO.

Michigan State Convention.

The annual meeting of the Michigan State Bee-Keepers' Association will be held at the Supervisors' Hall, on corner of Lyon and Ottowa streets, in the city of Grand Rapids, Mich., commencing Dec. 4th, 1878, at 2 o'clock p. m., and continuing two days. More than a score of the prominent bee-keepers of Michigan will take part in the programme, and nearly every branch of bee-culture will be considered by those specially proficient in the several branches. Valuable articles from several of the most extensive bee-keepers in the United States are also promised, and the session promises to be more interesting and valuable than any yet held. A cordial invitation is extended to all in any way interested in bee-culture to be present. The following are the names of some of those who will take part in the exercises:

R. M. Argo, Ky.; Fisk Bangs, Lansing; H. A. Burch, South Haven; M. S. Baker, Santa Monica, Cal.; Mrs. L. W. Baker, Lansing; J. Butler, Jackson; Frank Benton, Detroit; T. F. Bingham, Otsego; Prof. A. J. Cook, Lansing; Miss Davis, Delhi; James Heddon, Dowagiac; O. J. Hetherington, Saginaw; Capt. J. E. Hetherington, N. Y.; R. F. Kedzie, Agricultural College; C. F. Muth, Cincinnati, O.; T. G. Newman, Editor of AMERICAN BEE JOURNAL, Chicago; J. H. Nellis, N. Y.; J. L. Peabody, Denver, Col.; D. Palmer, Hart; Hiram Roop, Carson City; B. W. Southard, Kalamazoo; J. H. Townley, Tompkins; Paul L. Viallon, La.; Dr. Whiting, Saginaw: Miss L. A. Wilkins, Farwell.

A fine display of apiarian supplies will be on exhibition.

A. B. CHENEY, *President.*

T. F. BINGHAM, *Secretary.*

Everett's Extractor Corner.

Sparta Center, Mich., Sept. 18, 1878.

B. O. EVERETT, Esq., Toledo, O.: *My Dear Sir:*—Our honey season is now over, and after having given your Extractor a thorough trial, I am fully satisfied it is excelled by none. Mine being 4-framed, I suspected the gear might be too light; but find it heavy enough—*would have it no heavier.* Every ounce added weight makes it run heavier. Would dislike to have the canal leading to faucet covered. Yours truly,

A. B. CHENEY, Pres. Mich, Bee-Keepers' Ass'n.

Gibsonburg, O., May 17, 1878.

B. O. Everett:—Extractor came all right, and is according to order. We feel well pleased with it, and there have been three bee-keepers to see it to-day. Two of them have Root's extractor, and they say yours is ahead of his in several respects. Hoping you may have good success, we remain, yours,

BAIR & HOLCOMB.

I have many like testimonials from practical apiarists from all parts of the country, whom we all know to be sound in their judgment—not *unripe testimony* from *novices.*

B. O. EVERETT.

Toledo, O., Nov. 32, 1878.

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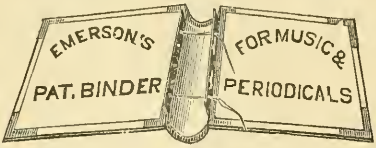

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